

The Australian **COMMODORE** and **AMIGA REVIEW**

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⇒ Project Stealth Fighter

⇒ Apollo 18, Platoon **Inside a software house**

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The Australian Commodore and Amiga Review

Vol 5 No 4 April 1988

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REGULAR APPEARANCES

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Editorial

Promises. New machines, improvements on existing models and new peripherals. All due real soon now. What does Commodore have in mind? Bigger, faster Amigas have been talked about for some weeks. They seem to be the most likely candidates. However word has it that they are further off, and won't be seen until later in the year.

A revamped Commodore 64 is also a possibility. Perhaps a built in 3.5 inch drive could be the way to go. But then the 1581 never really kicked off, and too much commercial software would only work on the 5.25 inch format. Speed improvements maybe?

My slightly informed guess leans toward an improved range of PC's. Perhaps a 386 machine, improved XT's and AT's. The Commodore 64 continues to rule supreme as the ultimate home hobbyist machine, but for serious uses, every man and his dog seems to be buying MS-DOS compatible gear. Commodore must upgrade their PC range to keep pace with

the ever increasing power being offered by other clone manufacturers. What five years ago cost \$8000 today sells for \$1500. It's a fast changing market.

For the home user, a PC doesn't appear to have a lot to offer. It's not as entertaining, musically or graphics wise. You can't program one as easily, or buy good software as cheaply. There are however some practical reasons for having a PC at home. For once you really can bring the office work home, or stay home the whole week and make home your office. There are more packages to choose from to do a job, and public domain software collections are now readily accessible.

Some believe the future for unconventional machines, and hybrid graphic and music based designs, is not as rosy as three years ago. It is said that with more people giving serious consideration to the practical uses of their investment, especially in the light of the prevailing economic climate, fewer people will be



spending money on a computer whose prime attributes relate to entertainment.

With the Amiga you get the best of both worlds - great graphics and music, and business software too. And optional IBM compatibility with the Amiga 2000.

Andrew Farrell

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Ram Rumbles

The 1541-2

COMMODORE'S NEW 1541-2 disk drive should be shipping by the time you read this. It's a new cost-reduced design with a shorter 1571-styled case and remote "brick" power supply. The drive motor is still belt-drive, and the ROMs do not, as has been rumored elsewhere, include any speed enhancements. However, save-with-replace, block-read, and other bugs have been fixed. The new drive is 100% compatible with the old 1541, and has an even better software compatibility record than the rev B board 1541, according to project engineer Fred Bowen. ■

New CBM PC clone

COMMODORE WILL soon have FCC approval for and be shipping its new 3-speed IBM/PC clone with built-in ports and sleek, small-footprint styling. List price for a monochrome-card equipped unit will be US\$699, US\$899 for the color version. The margins are said to be good, so discount prices may be lower. Wasn't it Atari who promised to deliver something like this???

1571 ROM incompatibilities

THE NEW 1571 ROMs are incompatible with most of the copy programs on the market. Fast Hack'em, SuperKit, Copy II, and just about everything else that delivers superfast disk copying will not work with the new ROMs. Remember, the new ROMs are in the drive in the new C128D, too. In addition, the drive in the C128D replaces the Western Digital programmable controller chip with a PLA (Programmable Logic Array) chip that is not as flexible. It will still read all the standard CBM and CP/M disk formats, but will not be programmable

to read other formats. I don't think this will create any problems with existing software, but it may get in the way if someone is working on a multi-format conversion program. ■

Teflon disks

KODAK'S VERBATIM division recently unveiled a new diskette that is Teflon coated. They claim you can spill anything on one, wash it off, and recover the data. They'll cost a little more than normal diskettes (a box of 5.25" disks lists for \$????), but the peace of mind might be worth it, especially for important program backups and data disks. ■

Sales and profits

NOBODY KNOWS for sure what impact the downturn in the stock market will have on the personal computer industry. Some people don't think it will hurt Commodore as much as it will IBM and Apple, since business traditionally suffers more in hard times than entertainment. In fact, entertainment was the only industry to thrive in the Great Depression of the 1930's. Of course, there were no computers back then, but it would seem to us that home computers could weather hard times as well as radio and film did in the 30's. Time will tell.

Meanwhile, in spite of the fact that they sold a million of the new PS/2 series computers in their first 7 months on the market, IBM's market share and total PC sales are down. It seems that corporate America is more interested in buying "industry-standard" MS/DOS clones from IBM's competitors than they are in buying into the unproven PS/2 line. Of course, PC sales account for only 15% of IBM's revenues.

On the other side of the fence, Ap-

If you remember *Arkanoïds* from your arcade playing years, then you will certainly want to buy a great new game called *Impact* from Pactronics, now available from your local Commodore 64 and Amiga retailer.

I must say I have been very pleased so far with the number of Classic Quest Adventure Games that have been sold as, to be honest, I was a little worried because they were text only games. But the feedback has been that they are so interesting, and so well made, that you soon forget about any need for screen graphics.

I am pleased also to announce that there have been very few divorces caused by addiction to the Classic Quest games. In fact, I know of one case where, having forgotten her husband's birthday, a very clever wife rushed out and bought him all three games, and he has not spoken to her since (not out of anger, but because he is so engrossed in the games). By the way, we have also offered them to Weight Watchers as an ideal way for people to lose weight, as nobody wants to break off in the middle of a game just to eat!!!

I know I go on again and again about educational software but I really do believe that current trends make it essential that children can use their computers, and are interested in using their computers, and I think we really need to start off that interest at a very early age. We have therefore signed up a distribution deal for Sesame Street Educational Games, suitable for children between the ages of 3 and 7, or maybe 8. I sincerely believe that by getting your kids started on educational games such as these you will make it far easier for them to cope with the use of computers at school.

Open the door to the magic fun world of computer education with Sesame Street educational software.

GYKAC

ple's new Mac models are selling like the proverbial hotcakes. Apple sales for their fourth fiscal quarter ended in Sept. were up 54% over the same period last year. Apple won't say, but the Wall Street Journal is guessing that figure represents sales of about 175,000 Macs for the quarter. Ironically, sales of the lowly Apple II still accounted for about 40% of Apples's total dollar volume, which represents a great many more actual Apple II computers than Macintoshes when you take the price difference into account. Apple sales for the year hit \$2.66 billion.

Just for comparison, Commodore's fiscal 1987 sales were \$806.7 million, and Commodore insiders are projecting sales of half a million Amigas for the coming year. ■

Hottest game all year Predator

THE PEOPLE at Questor were very keen to point out that the movie conversion, *Predator*, is now available on the Commodore 64. The orders are coming in thick and fast and predictions are being made that this is going to be one of the biggest hits of the year. A full blown review will be in next months issue. ■

New games

A BUS LOAD of new software has arrived the past few days, most of it being of quite high standard. The movies are still one of the biggest sources for computer games these days and *Platoon* has just come out on the C64 along with just about every other computer under the sun.

Also in the realm of war simulations is the naval task force simulation (try saying that with a mouthful of dry Sao biscuits) *Strikefleet*, Electronic Arts' latest software wonder.

Electronic Arts have also given us the sequel to *Skyfox*; *Skyfox II - The Cygnus Conflict*.

Project Stealthfighter gives you the full feel of a super high-tech fighter without the risks, this is one of my personal air combat favourites - it has a real Top

Gun feel to it.

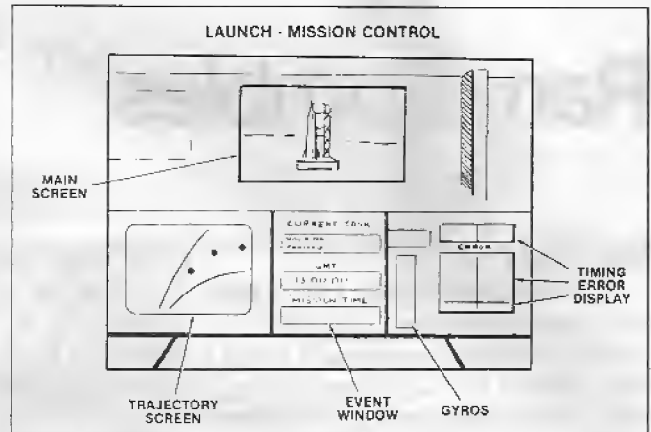
Yet another beat-em-up game has managed to slip into the market, *Bangkok Knights* written by System 3 (Authors of *The Last Ninja*) this is brilliantly programmed with some fantastic use of graphics and sound. This is a good one if you haven't already got a Karate game.

In the theme of the winter games, *Winter Olympiad 88* has appeared on both the C64 and Amiga. It has some features that *Winter Olympics* and the like left out.

Ozi Soft has also laid its hands on *Apollo 18*, a simulation of the first trip to the moon. This simulation is quite realistic with digitised sound and some very nice artwork. ■

PC news

THE ONLY game to become famous throughout the universe, *Elite*, has now become available on MS DOS format. If your machine is faster than 6Mhz then you can also have complete shaded



Apollo 18 from OziSoft

graphics which looks fantastic. If you don't have a PC already this could be a good reason to get one. ■

Amiga games

THE AMIGA was granted its fair share of software this month with four good titles and a few ordinary games. The game *Time Bandits* made a big splash and is probably going to sell very well, anyway we liked it.

Electronic Arts released a game called *Return to Atlantis*, this two disk game is a fantastic simulation and idea, it has a real adventurous feel to it that kept us playing for hours.

A go cart racing game called *Karting* did well with our mad drivers panel of Andrew Farrell and Adam Rigby who thought the game simple but a real lot of fun.

Slug soft

(Software that is downright slimy.)

THIS PARAGRAPH is dedicated to the games that would have been acceptable in the heyday of the PET, but for them to have just been released on the market now is a downright poor effort on the part of the software houses.

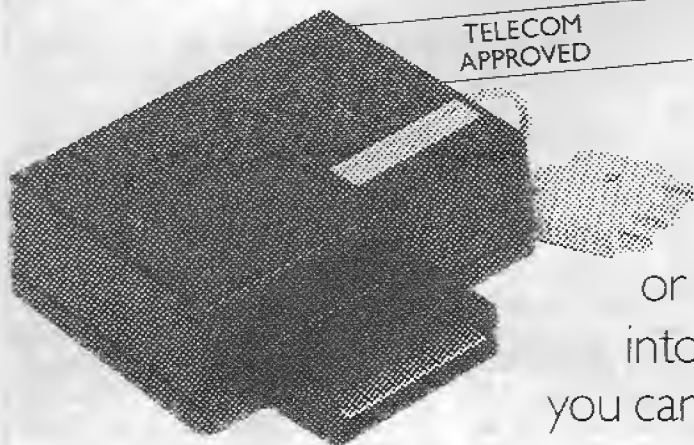
This month's SLUG SOFT game is *Kwasimodo* on the Amiga. The original C64 game released in 1985 had faster, smoother and more playable action. ■

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LETTERS

TO THE EDITOR

Oldest viatelian?

Four years ago I purchased a C64, dataset and 1526 printer. My immediate need was to print labels for my small mail order business instead of typing envelopes each mailing. Prices then were much higher and I was unable to afford a disk drive as well. I used a tape program *Totil.Label 2.6* and this has served me until quite recently, although when I bought my 1541 eighteen months later the program was transferred to disk.

Being pleased with the results with the labels, I got a cartridge word processor *Heswords* and from then on started to process my own leaflets.

I worked through Introduction to Basic part I, and then had to wait for Part II coming on the Australian market. Meanwhile I purchased several books of games and other programs, and after inputting them I improved them using the knowledge thus gained, especially in regard to colour and neatness in opening screens etc. My other need was for a stock control program which I wrote early on and then wrote an improved one whilst still using tape.

After acquiring the 1541 I went ahead in leaps and bounds writing my own programs, for invoices (to suit my existing invoice forms), statements, quotations, single labels and many other programs which suited my purpose.

Just over two years ago I acquired *Superbase* and set up systems for both personal and business use.

My first need was for a stock control file as the tape programs were no longer flexible enough. This also enabled me amongst other things to produce quick, easy and clear information for tax returns. I finally transferred my mailing list into SB about six months ago. I now spend most of my spare time writing programs to make more use of SB.

Using *Newsroom* I put out a family newsletter for friends and relatives all around the world. (I have had a new ROM chip put in the 1526 to do graphics).

Well, what is so unusual about all this? I am a touch typist. I do confess though I am completely unable to understand machine code so I stick to Basic, but am now studying Simons Basic too.

Eighteen months ago I got a modem and joined Viatel (actually I often wonder if I am the oldest Viatelian).

I am also a keen adventurer and have completed *Smugglers Inn*, *Infidel* and *Zork* and I am working on others at the moment.

If you care to publish my address in full I would love to communicate with other older users.

Barbara Holmes

PO Box 180, Belair, SA 5052

Ed: How about it, veterans, let's hear from you.

Any prizes

Hey what's this about "old timers" in their 50s (Dave Evans' letter ACR, Feb. 88). I passed the 50s quite a few years ago but have just

bought a basic Amiga 500 in the hope it will help me with my writing and information storage.

However, I must agree with Dave in his comments on "Compuspeak", that dreadful terminology which assumes we were all taught computers in Infants School. and this has nothing to do with age. Any newcomer to the game must be equally frustrated and annoyed at its use. My reaction when I come across such terms is to switch off and go on with something I do understand. A prime example would be on a Shareware disk where the instructions started "After un-arc'ing". That disk is due for re-formatting.

And what of the Amiga 500? It is obviously going to be a great help (and lots of fun) when I learn to pedal it properly - and find the right software. Perhaps my big problem is when it hiccups. Is it the machine, the disk or me? Is it a minor ailment or does it require the services of a computer engineer?

Gordon Barnett
Macquarie, ACT

PS — If there is a prize of a disk-drive, memory or *Word Perfect* (or all 3) for being the oldest user, I will admit to 66 birthdays so far.

PPS — This is not written on the Amiga - the printer has hiccuped!

Ed: Another old timer! Welcome to the ranks. Your Amiga problems are not unusual. Battle on. Try checking out the BBS's for info on ARCing. As for the prizes - we'll give it some thought - can anyone beat 66?

128D earns its keep

I was interested to read "over 50s square" Dave Evans' letter in your February edition.

This letter is from an over 60s rectangle (a square that has sagged a little), as I was 62 last August.

I bought my first Commodore 64 and a Datasette in late 1983, and then bought a 1541 Drive and a 1526 printer in early 1984. As I wanted portability as I was using the computer for work, I subsequently sold the 64 and bought an SX 64 and found out that too much sex was not the only thing which could make you go blind. (Have you ever tried to use a spreadsheet on a 5" screen?) Using a circuit from Electronics Australia, I con-

verted a small colour TV into a monitor, and used that at home.

At that time I worked in a large State Government Department and, as I was one of the very few people who knew anything at all about computers, I was co-opted into giving lectures and demonstrations to staff on the benefits of using computers in their work. Thus in my own time I had to quickly find out what word processors, spreadsheets and data bases were, and how and why to use them.

After teaching myself how to use *Easy Script*, *Easy Calc* and *Multiplan*, and *Infomaster* (and *Superbase* to a limited extent) I was then considered to be an expert (a drip under pressure?) on things

computer at work, and found myself being called on to advise others in the use of these types of program.

The Department had a few Apple II's, and a few Z80 Machines running CP/M, so I found myself learning *Visicalc*, *Zardax*, *Multiplan*, and *Wordstar* in addition to finding out how my own box of tricks (the SX64) worked.

Anyhow, my "do it yourself" system of learning and then teaching worked so well that during the last few months before I retired in August 1985 I was given the job of designing and implementing a Personnel Database for the Department on an IBM PC with a 20 meg hard disk. The system I implemented (using the Smart Series) is still in

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use and has not been modified as it provides all of the Personnel Management information and reports they need. As I had never even touched a PC.DOS machine until I started work on this project, and had to learn the intricacies of PC.DOS and the database program in my spare time, I feel that it was not a bad effort for an old square.

After I retired I sold the SX64 and bought a 128D plus a second 1571 Drive and a Star NX-10C printer, and this combination does everything I want it to do.

What do I use my computer for now that I have retired? Again mainly word processing, spreadsheet, and database work. I maintain my investment portfolio and my taxation records on a spreadsheet (*Swiftcalc 128*), my household inventory on a simple database (*Data-manager 128*), and use *Superscript 128* for word processing.

Many people might ask what is the use of putting your household inventory up on a data base? My wife and I were shipwrecked on the Russian Ship *Mikhail Lermontov* off New Zealand in 1986 and, by being able to list all of the personal belongings we lost, we were able to claim for, and be recompensed for all of our losses.

Finally, do I do any programming? The short answer is no. I do fairly simple things like writing my own Printer Driver for the NX-10C and Macros for *Superscript*, but do not like programming as it is too time consuming.

With the number and diversity of programs available for Commodore computers, either commercially, or in the public domain, I think it is rather like re-inventing the wheel. I want my computer to work for me, not me for it.

Graham Robinson
Stafford, QLD

Ed: Bravo! A fine example of how rewarding a hobby computing can be. Any other old timers who would like to entertain us further, please do write!

What's the problem?

Something has gone wrong with my C64 computer setup. I've connected my keyboard to the disk drive. Then I connected the disk drive to the printer. Everything switched on I attempted to load one of my printing programs. A searching message appeared, but the disk drive didn't start to load my program.

The disk drive could be used just with the keyboard, but as soon as you plug in the printer the disk drive doesn't work again. The exact same thing happens with the printer. You plug in the printer-only and it works fine but when the disk drive is hooked up both of them konk out. Could you please help me with my problem.

Adam Moy
Kelso, Bathurst

Ed: Try pressing the "on line" button on your printer, this should fix the problem.

Serious slant

Just a few words to compliment you and your staff/contributors on the improved "Review" of the last few months. Although I've often flicked through the magazine in the past, it has usually been left on the newsagent's rack because of insufficient items of interest, too much concentration on games and reviews for my liking. However, the last few issues, with the articles on *Easyscript* and *Superbase*, programming and the hardware modifications are right up my alley! So, too, the reviews of software such as *Fontmaster* and *Mini Office II*.

Following the *Easyscript* series, how about some comparisons (showing similarities and differences) with the more advanced *Superscript*? On the *Superbase* scene, I'd like to see an application for scheduling of plant maintenance - including provision for maintenance records, plant details, printing of appropriate input forms for use in the field calling up of reports, etc. Another application, (as I'm a librarian for a small club), is a suitable program for the indexing of magazine articles, with cross-referencing by subject category, and provision for a borrowing system for, say, 30-50 users.

Another series in which I'd be interested is the use of integrated program packages, or experiences and hints of those users who have managed to combine programs not necessarily intended to work together. Is there a spreadsheet which is compatible with *Easyscript* and/or *Superbase*?

Finally, a plea to not completely forget the 'orphan' Plus/4 computer or the 1570 disk drive. Sometimes, just a hint of the compatibility of an article, a program, etc., with these items would make their owners feel that at least someone is prepared to offer support. For instance, *Script/Plus* is almost identical to *Easyscript*, and *Superscript 64* also operates on the Plus/4. (*Calc/Plus* is quite a good spreadsheet, too, but doesn't appear to be compatible with any wordprocessor or database).

Mike Maloney
Delacombe, Victoria

Ed: As far as we know there is no spreadsheet compatible with Easyscript or Superbase, but for integrated wordprocessor, database and spreadsheet try Mini Office II.

Computer support

I would like to make a comment about your article in the February 88 edition about supporting the small computer stores, page 45.

A few weeks ago I bought my first computer, an Amiga 500, from one of your advertisers, Computer-scope Blacktown.

You could imagine the hair pulling I was doing, being the first time I had ever put a finger on a computer. Three times I have gone back to the shop and each time I have received excellent service from Patrick Ryan who runs it.

The problems haven't been with the computer but with me.

Patrick each time sat down with me at his instore computer, I explained my problems to him, every time he showed me what I was doing wrong, he showed me on his computer what I should do, then he had me sit at the computer and watched me go through what he had shown me. This wasn't for five or ten minutes, sometimes he has kept me there over one hour, making sure I understood.

I would like to say to all your readers, if you buy your computer from a department store salesperson who 10 minutes before you entered the store was probably selling underwear, and after you left was probably stacking shelves, where is the technical backup? You might pay a little more at your computer shop, but the back up service far outweighs the few dollars you save.

I would like to thank all the Patrick Ryans and the small business computer shops for their excellent services.

If anyone has bought their Amiga from a department store and are having problems they could contact Allan White of White's Computers, who also is another advertiser in your magazine. He has just started

an Amiga beginners course, it is held in a very friendly atmosphere. The course is an evening course and goes for about three hours for 3-4 weeks, one night a week.

Lionel

Ed: A good point that should be considered especially by first time computer buyers. You just don't get service from the department stores.

Extra tracks

Like a lot of people, soon after buying my 64 I started programming. A lot turn out to be rubbish, but surprisingly some programs have been quite useful. Then came the disk drive and with the help of this invaluable book *Inside Commodore DOS* I really enjoyed working with the 1541C. Eventually, for sheer pleasure and intellectual stimulation, I worked out a protection scheme for some of my disks.

However my problem is, how do you format 36, 37 or even up to 40 tracks on a disk? If there's an easy answer to this question let me know as it would be most appreciated.

Froggie Francois
Katherine, NT

Ed: Try any good copy program or Dolphin DOS!

Part needed

I urgently require some help in finding a supplier for Skai 64 disk drive parts. I have been in contact with Benson Computers, the original suppliers, but they no longer deal in the Skai 64 and are most unhelpful with information concerning the disk drive.

I need to purchase a C3359 transistor for the power section of the drive. It would appear to be a new type of transistor, or at least it

doesn't appear in the catalogues available to us here.

I would be grateful if you, or one of your readers/columnists could put me on to a supplier for the part or give me some information regarding an alternative transistor.

Dennis Dowling
Katherine, NT

Ed: Any help, please write to us. Perhaps the makers of the Ex-celerator drive have a similar component?

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Interview

by Michael Spiteri

with the creators of Lord of the Rings Part 2

A candid interview with three hilarious chaps about almost everything concerning adventure games - creating them, playing them, selling them. I even got them to give out a few secrets and hints. Yes, folks, these are the guys who are brave enough to attack Infocom and are mad enough to turn Frodo into a binary number.



From left to right Paul Kidd, John Hazwood, Norton Truter

The men behind the second part of *Lord of the Rings* - *Shadows of Mordor*:

John Harwood - Project Leader

Paul Kidd - Storyline Developer

Norton Truter - Programmer

(For those who don't know, Beam Software is the name of the Australian firm who have been producing worldwide classics for many years - including *The Hobbit*, *Castle of Terror*, *Sherlock*, *Lord of the Rings*, *Mordor's Quest*, etc.)

These games are distributed under the Melbourne House label. However, I recently discovered that Melbourne House do not exist in Australia anymore, and that the English MH has been bought up by Masterronic - who incidentally, have kept the Melbourne House name. Mel-

bourne House products are distributed in Australia by S.L.M Publishing, which are the old Melbourne House mob. Anyhow, Beam Software is still a strong firm and is still churning out the classics - *Shadows of Mordor* is one of them.)

What were you doing before you worked for Beam Software?

Paul: I carefully did a university course in Aztec religion and culture and English Civil War history, you see, which suited me to living on the dole till I found a job doing something esoteric, so that's how I ended up here.

John: I came from computer meteorology through a couple of unexciting jobs working at computers to a relatively exciting job in computers.

Norton: I walked straight out with a Bachelor of Science degree into this job. *When did you first touch a 64 computer?*

Norton: The first time I used one was when my brother in law bought one a lonnnnggg time ago, when they first came out for around \$600, but I didn't get to use it much until before I came here.

John: My first experience was not until about a year ago, and it had very little to do with *Shadows of Mordor*, because the development of our adventure game series is done on a 16 bit mini-computer and then we cross-assemble as appropriate to the different machines. So we had finished *Shadows of Mordor* and gone onto other projects before we had actually seen a Commodore.

The 16 bit gives us a lot of power to do testing and development which we just don't have on a Commodore 64.

Paul: I don't touch them at all! I leave machines alone because they are evil and they plot against me. I'm not a programmer at all.

John: It might be worth us telling you our actual positions here.

I'm the project leader and I inherited the development of *Shadows of Mordor* when Phillip Mitchell left, who mainly developed the adventure system. Norton is the one who actually does the programming, and Paul is the storyline developer, so the way the games are developed is Paul will say "Okay, we are doing another Tolkien game!"

Paul: With screams of "DON'T, DON'T, DON'T !!!" coming from the others.

John: And he will come back with about 30-40 printed pages of game ideas, maps, things like that.

Then we will all sit there and review it in terms of the last couple of games.

I'm the one who watches the silly ideas that come up. Then Norton actually takes it away and transforms the brilliant dreams of Paul as edited by me into machine code — hopefully! So was it just you three who put together *Shadows of Mordor*?

John: Phillip Mitchell started the development but he had certain other demands around that time, and the game was about halfway completed at the time he left. Then we found out that we had gone grossly oversize by about 33% more than we could afford, so we had to do some major plot revision, and that was an interesting introduction into the whole thing.

*Then really, *Shadows of Mordor* was your first project.*

John: Yes, it was my first, but not Paul's first. He had previously worked on *Fellowship of the Ring* (part 1).

Norton: *Shadows of Mordor* was the first thing I did when I first came here.

Mike: Is it necessary to be a whiz at adventure games to be able to take part in producing one?

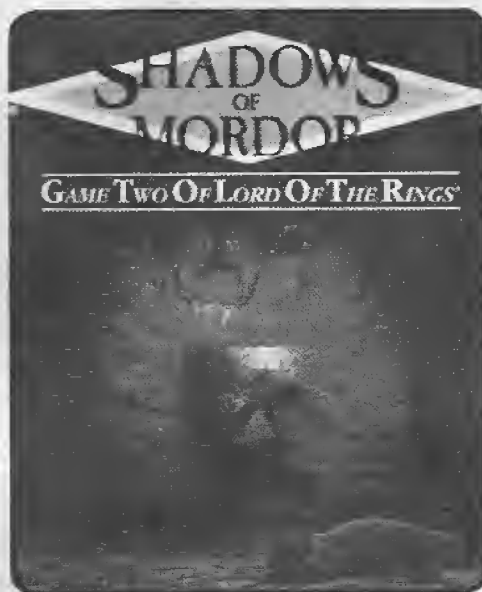
Paul: I loathe adventure games. I hate wrestling with parsers, they bore me to tears. I don't see why anyone would voluntarily sit there and constantly try and tell the machine what they know it is going to accept but they can't find the words for it. So, I try and avoid that as much as possible!

*Did those feelings occur before you started doing *Lord of the Rings*?*

Paul: Yeah, they've always annoyed me, but er, now I write them!

John: It's useful to have all of the other adventure games just to find out the things to avoid as much as possible.

I mean, the inevitable problem of the parser, it's always a problem. You can never account for every single way it's going to work. We've had a lot of problems lately because up until the last couple of years the company has been aiming mainly at the British market, then we recently changed over to the



American market and it's almost not the same language they're talking over there; they have different grammar and they will say things very differently. It pays to know the limitations of the machine, but beyond that, it's closer to novel writing than anything else.

*When you were creating *Shadows of Mordor*, what did you take into account when preparing it? Did you take a serious look at the first game?*

John: Well, there were a lot of complaints about the first *Lord of the Rings* game, particularly part 1, in that it was different from Tolkien, that there was non-Tolkien elements, so we went through it ruthlessly and eliminated many things that were really quite interesting but couldn't be based in Tolkien, and then people started saying it was too slavish, so I don't know what the happy medium is.

Norton: When we started going through it, there was really a straight line - the characters went from point A to point B and did very little inbetween, so when we came to establishing an idea of what was going to happen in that area of Mordor in the game, we pushed harder to take out the things that were not even close to the book.

John: Yeah, and we had the big space problem as well.

I noticed when the first game was released everyone was complaining that the game was too slow. However, when playing its sequel I noticed that game play was much faster. How did you achieve that?

John: Fundamentally because the biggest time consumer in the adventure system was the interactive characters. *Shadows* only has two whereas the first part had four, so that resulted in an increase in speed.

Norton: And there were some major changes in the parser which was speeding things up.

John: And it was also getting rid of the bugs that popped up. From a technical side, what happened was, we made a list of every complaint. I had the habit of collecting all the hate mail that we get and so collected together the complaints that we could do something about. So when we actually plan the game we discuss what we can handle and what we cannot.

The idea was to make something that was better than *Lord of the Rings*, which definitely had faults.

*Were you trying to make something that was increasingly better than *The Hobbit*?*

Paul: I don't think *The Hobbit* actually came into consideration, because that was a very different game. The system we used for *The Hobbit* changed quite a lot for *Lord of the Rings*, and it was the layout we were using with *Lord of the Rings* that we used with *Shadows of Mordor*. *The Hobbit* was also a while ago; for it's time it was heading the field, but as everything else caught up with it we couldn't use it as a benchmark.

*Who did you have in mind when you were writing *Shadows of Mordor*? Was there a certain market you were aiming at or was it basically the people who had bought *Lord of the Rings* you were after?*

Paul: No, we actually expected that this would be the first game in the series people would be buying. Anyone who enjoyed the first game would buy the second, but hopefully we might be able to sell this as a game in its own right, so that it is not seen just as a follow-up. And as John said, it was aimed specifically at the English market.

Norton: We made an effort to steer away from anything that forced you to play the first game before *Shadows of Mordor*. We wanted the player to understand what has happened, but not to have played the first game.

What about the American market? I understand that Lord of the Rings sold quite well in America.

John: Certainly the amount of care and attention the American market requires when releasing the games is about 50 times more than the English market does, mainly because of the higher quality, in general, in America, and because they produce fewer units and titles than the British do.

In Britain there is certainly the pressure to push everything out into the marketplace; I mean, you get about 18 new titles a week in Britain! Of course, it's not worth spending the time and attention on a game because you won't get your money back. Whereas in America they'll spend a lot of money on small things like the packaging, including fold-outs, and maps, and making the rule books in little parchment-type paperbacks, things like that. You know, the attention to grammar, etc.

Can adventurers expect a third part to be released?

John: Yep, we're working on that now!

When can we expect it?

John: Definitely by Christmas. We'd like to get it done well before then, but it's up to the marketing people whether they are going to release it before then.

Do you have a name for it at the moment?

All: Nope!!

John: The closest we got to it is "Frodo

is Very Silly".

Paul: *Shadows of Mordor* almost went under the title "Where Hobbits Dare", however it was decided the last minute that software contract obligations prevented it.

Norton: We didn't like the title *Shadows of Mordor* as it was so we made up some more, and when "Where Hobbits Dare" came up it caught people's imagination and everyone loved it! A possible title for the upcoming one is "The Nazgul Has Landed"!

John: No, we've got the storyline, we've got everything figured out, but the name is always the problem.

Did you have a big problem with the publishers of the Tolkien novels?

John: I ended up spending a lot of time answering phone calls from the respective publishers who objected to this little bit or that little bit, and I had to explain to them why we can't do this, or no, we're not going to do that, or OK, we'll do this if it's going to keep you quiet for a little bit!

I think everyone just likes fiddling and once they get the idea that you're prepared to change a small thing, it just grows from there. It gets to the point where they say things like "Can you change the giant spider to a frog!"

So there is quite a bit more involved when basing an adventure game around a novel.

John: We're limited from the start; and because the work has to be passed by being in a Tolkien state, we automatically can't do certain things. I think it has put us a bit out of touch with the British market because they are very much into immediate gratification, and adventure games that don't give them four-letter words just aren't selling. It's a pity.

The Americans are incredibly concerned about grammar, and as I said, it's a different language. Fortunately those things are easier to cope with.

I suppose with a market hogged by Infocom you have to be careful.

Paul: I don't know to what extent any-

one has ever typed in any of those phrases that Infocom says their parser can cope with. Yeah, but who wants to remove the small midget from the red coffin sitting with the whiskey bottle and holding the fish in the right hand? I mean, no-one does!

Our system will handle the long sentences as long as you don't try to do incredibly silly things. I'm not pretending that it's the most complicated out - but it works! Infocom's one will handle incredibly silly sentences and you need incredibly silly people to put them in!

Do you have any favourite adventure games, besides your own?

John: I've got to admit that my adventure games are all warped due to the fact that I've done most of my programming on a mainframe computer, and on the mainframe, of course, there's that game *Rogue*, which is almost an adventure game.

On the 8-bit machines I haven't really played a lot. I think that games like *DejaVu* are great. That's a lovely idea - I'd like to see something proper done with it. It was a very static game, and in some ways more primitive than the *Zork* series, but the technique used to actually play the game was such a delight to discover. As soon as someone does something really interesting with it, it should sell really well.

Can you see the adventure market dying off? Is the third part of Lord of the Rings your last adventure game?

John: It will be the last adventure game for a while because we really want to take the adventure system out of commission and look at something seriously better. It's reaching that level where we've got to face the fact that other people are moving on. I think the biggest problem we have at the moment is just finding the time to do all these things.

The thing with adventure games is that they don't sell as well as the arcade games do; particularly in the British market. However, they keep selling. *The*

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Hobbit is still selling at about half of the rate it sold out during the couple of months after its release. It will keep doing that for years. *Lord of the Rings* is still up there in places and it just lasts and lasts.

Norton: Arcade games have the habit of selling well, then suddenly dropping off, whereas adventure games maintain a steady run in the market. They start low, stay low, and stay forever!

John: In America adventure games will stay. The British market is swamped in this surreal self-gratification angle, but the American market is much different because of the age of the average computer owner.

In England you've got a 14 year old with a Spectrum and in America you've got a 28 year old with an IBM, and they want to buy different things. So, from that side, I don't see the adventure market disappearing.

I'd like to think that Australia is a bit on the intellectual side too.

Forget the market pressure for a few minutes. If you had your way, would you produce a text-only adventure? I remember hearing that Sherlock was going to be just a text adventure but the market wanted graphics.

Paul: The punters want all graphics. I feel it dresses up a game. Text scrolling past drives me bananas.

Norton: A well placed picture lightens up the adventure.

John: Certainly when you have adventures like *The Pawn*, you have that gosh-wow factor, "I've never seen anything like that before!!"

What are the stages you go through when writing a game like Shadows of Mordor?

John: First, if it's based on a book, well... read the book.

You've got to create some sort of map and break it up into problems that will be handled by the player, so it's a matter of reading through, no matter how well you know the book, with a million reams of paper next to you. You start to

get an idea of which directions they take, and every time a problem appears or even suggests itself, you then take notes because it could be a potential game problem. Then you sit down and expand these game problems out into little tasks, figuring the programming aspect - is it a feasible thing to do? Is it an interesting thing to do? Because when we were doing *Shadows of Mordor* there were some problems in there which I consider to be mind-numbingly tedious, but Phillip Mitchell insisted they go in because he likes very complex problems that require a lot of repetition and everything.

I have a role-playing background - and I'm not so much into immediate gratification - but I hate having to drag myself through something when I'm playing a game for entertainment, so with the current game we are doing at the moment (*Lord of the Rings 3*) we are trying to avoid those problems.

Anyway, we then tie the problems into the locations on the map, then we have got a plan we can work from for figuring out the programming tasks!

Is the player restricted to solving one problem at a time, or can the player choose what problem he/she wants to solve first?

Paul: The problem with having it tied in with the *Lord of the Rings* books is that we have to follow their storyline as much as possible; so, what we are setting up is a system where a problem opens the way for you to continue on deeper into the adventure. You can't move into this new area of terrain without figuring out how to get past the swamps, or you can't get to this area without figuring out how to kill that particular monster.

Norton: But we always try and have more than one obvious way past a problem.

John: We hate a single solution.

Paul: For example, you have this cliff (in *Shadows of Mordor* there's this infamous cliff). It's possible to do several things - like push Sam over the cliff, climb down, tie rope to Sam's embedded

corpse, and climb down again...

John: This is bad...

Paul: And then there is the sequence by which you roll the rock, uproot the tree giving you a nice safe way down.

Yes, but by giving different solutions to one problem, aren't you cutting the player off solving other problems and creating no-win situations?

Norton: Not necessarily. Take the cliff section - there are two valid ways to get down the cliff, that will get both Sam and Frodo down. The other way is to kill one of them, but later on you are going to need the other character. They didn't die in the book, that means you are going to need them together in certain sections. There is always a way through the cliff section, but if you happen to lose one of the characters you are not going to make it through a section further on.

A bit like in The Hobbit where if you kill Gandalf and Thorin you won't be able to escape from the goblin's dungeon.

John: Yeah, but we try to avoid many dead-ends because that's a really really irritating thing.

Norton: But with a major element like "Frodo is now dead" the storyline seems to drift out. We do consider that when we design the game and offer various options.

John: The obvious one in this game is that in the book Frodo, Sam and Gollum all get to the Crack of Doom and the Ring is destroyed. We've had to think about suppose Sam dies along the way, or what if Frodo dies along the way...

Norton: ... if Gollum had killed him...

John: So we've taken these into account in the design and there are a whole range of different possibilities. Obviously the one closest to the book is that they all get there, but if you get there without one of them, the game is not going to say "Sorry, you have not got the right collection of characters - you cannot finish the adventure."

Is it essential for the player to have read the book before play-

ing the game?

Paul: The best clue sheet for playing the game is to read the book, which was how it was intentionally designed. We don't intend for someone to have read the book as a prelude to playing the game.

One of the problems we had with setting up the design was to make sure that someone who is very familiar with the book can't just walk through the whole game. That is a difficult proposition when you are trying to make the game as accurate to the book as possible. It's a fine balance that I hope we have achieved!!

Okay, this is the inevitable question, it had to come out sooner or later - everyone in the world knows about the famous bugs - can we see the end of these in Shadows of Mordor?

John: I don't think *Shadows of Mordor* has any bugs. I think that is one of the reasons why the game is faster. The game has been tested - it's had about two months of steady testing - and doing our development on the mini-computer we can have the machine doing testing for us!

How long would it take to iron out a single error in the program?

John: When I first arrived here during the *Lord of the Rings* project I was asked "Listen, do you mind testing it - the game IS perfect, but test it anyway!"

Well, it had been tested by people who knew what to do to get through the game, but they hadn't had people running around trying to eat tables, or collect every single item and put them in a pile, or kill every single living thing in Middle Earth, and it's amazing how you can make a program crash when you abuse it.

The best example was perhaps, monsters; in the first version of *Shadows* we thought, the player has done pretty well so far and he gets to the climactic scene where he meets Shelob (giant spider), and Shelob is well upon him with dripping fangs ready to tear him to bits, and the



player enters "Say to Shelob, Go East" — and Shelob goes east. WHAT!! we all scream! The way the system had worked originally is that we left a little loophole so that any monster did exactly what you told it to.

That was relatively easy one to fix, but there have been others ...

Paul: If anyone does want to cheat in getting through *Lord of the Rings*, there was one stage - I'm not sure if it was fixed or not - when the Black Riders appear. What you should do is "Give Ring To Black Riders", because the Black Riders were programmed to attack whoever had the Ring.

What happens is one Black Rider takes the Ring, another Black Rider sees the Ring and kills that Black Rider, and the other one sees the Ring and kills that Black Rider; then Frodo says "Give me the Ring" and the Black Rider gives Frodo the Ring and ride off!! There are many odd things like that which people haven't tried.

John: *Shadows* had a lot more testing than that, a great deal more, but things still turn up and there is not much we can do about them because some of them we have not thought of.

Now to the funny sides. An important part of all adventure games is the perfectly-timed funny. Do those occur in the series?

John: That's a difficult question. In

Shadows the feeling of the publishers at the time was that humour was inappropriate. It was initially set up with a fair bit of humour, as we were told. There are a few funnies in *Shadows*, not as many as we wanted because the English publishers would write back and say "This is silly!! Get rid of it!!" One good one that managed to slip through, for example, if you try swimming, and there is no water around, Frodo will be told that there is no water for him to drown in.

We like to do things like that, but it was unfortunate with *Shadows* because we were asked to get rid of them. Hopefully we'll have a bit more control on this one (part 3).

Norton: The last time *Shadows of Mordor* was reviewed by the publishers they didn't like the humour in the game.

John: Well, you don't really find that photos fit in Middle Earth, pictures of fighting pigs, that's silly. There was even a watery tart, but there are too many implications in that. It was not appropriate. We did have bathing orcs - they were quite cute, they used to have some quite good lines. Do the highway patrolman still do their WW2 movie lines?

Norton: I think they do....

John: (interrupts), Be quiet, thanks, we don't want anything secret to slip through.

Norton: Yes, you're right.

A lot of the fun in playing the games actually comes from finding secret laughs.

Paul: Right. They are there if you look for them, however the obvious course doesn't have them because we knew that was the path the reviewers would take.

John: Two orcs sitting there waiting for you to pass, just slip the ring on, hide in the bushes and listen to them talking between themselves.

When I reviewed Shadows I made mention of the funny parts because that's what people want, basically!

Paul: They are really a memorable part of the game.

Norton: If you are playing it and you see a really good line, you'll remember it.

Especially once you have solved the game after three or four months, it is good to be able to go back and explore the place for funny incidents.

Paul: What we're probably moving into in the third game is to be much heavier on the atmosphere ...

John: They're not having a good time in this game, let's face it, there's this waterless ash and desolation surrounding them, as well as hostile orcs which just might as well eat them. It makes it moderately hard to start cracking one-liners as they go.

Paul: It's a lot heavier on the atmospheric bits of text, because a lot of the feedback we get is that people want more of this.

John: But if you do something absurd, we'd like to give a witty reply.

Next, to the graphics. Who were responsible for the graphics in Shadows of Mordor?

John: Three of our artists worked on it, two of whom are no longer with us, (Paul makes sounds like arrows shooting) no, they left voluntarily.

Were they the same artists who worked on Lord of the Rings? Basically I'm asking because The Hobbit and Lord of the Rings featured the same sort of graphics whereas Shadows went into a better resolution.

John: I don't think so. The artists were told what the system could cope with and they did an excellent job within that.

I won't go away without asking for a few clues on Shadows of Mordor ...

John: We can give you the perfect solution if you want. We have developed a system. I have a copy of file that will play the game perfectly and score 100 out of 100.

Paul: It will play it for you ...

John: Yes. Just sit there and watch it. It's a good way of testing it.

Paul: And there's a silly version that will walk around and do all the silly things.

Is there a problem in the game that you think is a bit too hard?

John: Yes, the log.

We mustn't speak ill of those before us, but that was Phillip Mitchell's favourite. It is also the one I hate most.

Norton: The log problem was very repetitious and you had to keep going back for logs. Once you've worked it out, once is probably enough.

John: And we had to invent a special verb for the movement of logs; obscure stuff, um, like lever and such.

Paul: The other one I'm not fond of is the ambushing orcs on the road. You have to be quite experienced knowing which order the orcs come past, because there is a perfect order in which to get them, otherwise you're gonna die! Having played this game about 400-500 times over the last year or so, it drives me batty because after a while I get so blase, I forget which orcs come where, and because I got so blase I'm not bothering to save the thing anymore.

John: There is an easier way of handling those orcs, and that is for Frodo to stay in the tree and get Sam and Gollum to jump out. Gollum is much tougher than the hobbits are, he's a much better fighter!

I found that the key to success. You give Gollum a sword, and hope he's still behaving nicely.

Norton: We did have some problems with the rocks and even with the branch, stuff like poling the raft, levering the rock.

John: That's not too bad, lever rocks is okay, poling the raft is a bit sus.

Norton: ONLY just okay. We couldn't find any way around that, apart from taking the cliff out all together and that would make it very easy to get from point A to point B. We couldn't find a way of getting around that verb! We had dictionaries, thesauri! Nope, no other word!

John: Yes, it's a world number one

bookstore around here.

Finally, I suppose you'd get a lot of letters from kids who want to write their own adventure games. What advice would you give someone?

Paul: Get a job!

John: No, no, I'm the one who has to deal with these things. We get a lot of submissions from people; they send a letter and the letter says "Hey, I've got this really great adventure game and it's called Spagbat! Yours sincerely, Fred Smith"! And that's it. I wonder what machine it runs on. I just get a cassette. It's not labelled. So for a start, my advice is: Please say what machine it's for - that helps.

Norton: How to load the game.

John: Yep, how to load the game, however with the Commodore it's not too difficult, but some machines can be quite challenging. The Amstrad can be pretty dreadful sometimes.

Also, they're sending in this game in the hope that we'll sell it for them, so it would help if they enclose documentation; what the game's about; what problems there are in the game. A map of the game would be terrific, because that means I can go through and test it properly and not spend weeks trying to work out what the obscure parser verb is.

Paul: Yes, we would like to see what the game could do. So if you've got a nifty section - give us a cheat sheet!

John: We're looking to review the game, not to crack it. We are always happy to look at games because SLM does a reasonable amount of business in that line!

And with that I left the shores of Beam Software, convinced that the creators of adventure games are just as friendly as the people who play them!

And to show how nice they are, S.L.M publishers have offered 10 copies of *Shadows of Mordor* as prizes for the first Adventurer's Realm Competition — see page 45. ■

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FINANCIAL SYSTEMS SOFTWARE

Reflections: looking back at the 64

through the eyes and mind of Adam Rigby

MANY THINGS HAVE transpired since the introduction of the Commodore 64 - two new Commodore models have been introduced, Commodore have brought in their range of IBM clones, the Amiga has made its rather large splash on the scene, and Andrew Farrell has purchased a new car. Looking back through the issues of *Australian Commodore Review* we can see that the face of the computer market has changed somewhat, for instance:

March 1984

The Commodore 64 is fresh in the market and much interest has been inspired by this new machine. The introductory price was \$699 - not much less than you could pick up an Amiga 500 for nowadays. Gareth Powell published the first *Australian Commodore Review* to support the new wonder of the home computer scene.

Some of the first pieces of software available for the C64 were from Commodore themselves and were very simple compared with the games available on today's market. Do you remember such titles as *Le Mans*, *Jupiter Landing*, *Clowns* and *Lazarian* - all these were available on cartridge for \$??.??

April 1984

Commodore released the SX-64, the executive transportable C64 with built in monitor and 1541 drive. Gareth Powell described it as "the screen with a built in headache", but sales were good and the SX-64 found its way to many homes.

OziSoft released the Koala Pad and drawing package which led to a variety of other drawing board packages such as the *Super Sketch* package. Even nowadays, some time after it was discontinued, the

Koala Pad is a sought after commodity.

May 1984

In the merry month of May 1984, we started to see some more serious games, faster, smoother and more complex - such as *Jumpman* and *Attack of the Mutant Camels*. Also we saw the first complete text adventure for the Commodore 64, *Underworld of Kyn* - produced by our very own Andrew Farrell.

At this time Andrew Farrell became the editor of *The Australian Commodore Review*, a radical move by Gareth Powell which turned out to be a successful one.

June 1984

Some more of Minter's software made it into the hungry 64 spot, *Matrix* which proved to be just as popular as his earlier games. This was another fast paced game which was the sequel to *Gridrunner* and had some reminders of the bizarre *Mutant Camels* game with camels floating around the screen on occasion. *Eagle*



Empire, a conversion of *Phoenix*, was also released with some positive results.

August 1984

The latest games list was comprised of such greats as *Pingo*, *The Hobbit* - which gave this writer many sleepless nights, and *Aztec Challenge*.

The first in a long line of 1541 speed boosters, the 1541 Express made its way

into the pages of *Australian Commodore Review* with a rave review of the speed increases possible whilst using this new fangled cartridge to produce amazing results - up to three times faster than the ol' 1541.

November 1984

Music starts to take the spotlight and *The Incredible Musical Keyboard* hits the market. With the newfound interest in



the musical and sound potential of the 64, the development of this feature became more rapid.

The first of many movie conversions made its way to the C64 entertainment software range - *Ghostbusters* hit the scene and sold very well indeed.

Many of the biggest and bestest adventure games hit the market place, such titles as *Ultima III: Exodus*, which kept me without sleep for several weeks

January 1985

A new speed phenomenon is released, Turbo 64, which changed the format of the file and created an atmosphere whereby the files were loaded approximately six to ten times faster than normal. This did however have its inherent problems, all your files had



to be converted into the new format. Also multiload programs had to be changed into single file programs as Turbo 64 doesn't like multi-loads at all - not an easy task if the program itself is protected!

In the realm of new games, *Pitstop II* made its way into the market place and became one of the best racing games ever produced for the C64. Monty the Mole started his epic run - with all the numerous sequels to his adventures one could be excused for thinking that this was the film industry.

March 1985

The Currah speech cartridge gives the C64 a voice and makes all those scenes from wargames possible in your own home - what a luxury. This was all very exciting but perhaps the most important news around this time was the information that a Commodore 128 had been developed by CBM and was going to be in Australia very soon.

April 1985

Andrew Farrell endeavors to gain new heights in popularity by changing his image, seen with advertising guru Ric Richardson - the first appearance of the Bolle sunglasses on the editorial page.

Not quite as fashionable as Bolles but perhaps more practical is the new release from Commodore, a IBM compatible PC-10 - the standard machine came with two 360K drives and 256K of RAM, at \$1995 this was a bargain indeed.



Also in April we saw the introduction of the Skai 64 disk drive, in the words of Andrew Farrell, a 90% compatible drive. The Skai however did have its place and helped to fill the gap caused by the slow shipments of

the 1541's, besides it was 25% faster.

Another 1541 dos speeder-upper-er appeared and was duly welcomed. The 1541 Express, a cartridge that plugged in and there you were hitting warp speed in your revamped 1541. Still the 1541 Express did not quite cure the "1541 blues" as there were still a few side effects of this generation of turbos. We had to wait until the Cockroach Turbo ROM for a truly a satisfactory upgrade.

Carriers at War hit the headlines as did *Spy vs Spy*, *Ghostbusters* and *Boulderdash* - all these proved to be very popular and were followed up by *Spy vs Spy II* and the various *Boulderdash* sequels.

June 1985

Communications are coming increasingly within the reach of the average hobbyists with the average budget. With the Micromodem III direct connect modem we saw the price of get-

ting into the bottom end of communications fall considerably.

F-15 Strike Eagle is delivered to the hungry C64 market, and with it came rave reviews on the quality of the game and reports of how happy Ronald Reagan was that the youth of America could be trained in mercilessly destroying the enemy from the cockpit of F-15 Eagles.

Questron, an *Ultima* style game, also found itself on the market in June with a very good response - the adventure freaks like myself lapped it up with eagerness.

July 1985

Wow, amazing, truly wonderful and astounding. All these and many more superlative statements were made over a new birth at Commodore, the Amiga. This was just on news and hearsay, not for many weeks would we have the machine in Australia. The estimated price for the Amiga was \$2000 not including colour screen. Since Commodore managed to squeeze it down to \$1900 including monitor, it placed the Amiga streets ahead of its competitor the Mac.

Back in C64 mode, new software titles were pouring out

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on to the market with a definite increase in the quality level of the software. *Way of the Exploding Fist* was the first in an influx of Karate style simulations - getting away from high-tech destruction to "back to basics" bashings.

Amongst the literature and drama conversions we saw the musical classic, *Rocky Horror Picture Show* and the space comedy, *Hitchhikers Guide to the Galaxy* converted to Commodore 64 games of the highest nutritional value.

September 1985

Isepic - A small step forward for technology and a giant step forward for pirates. This new innovative copying/breaking device allowed a snapshot to be taken of memory, therefore all disk protection techniques had just become obsolete, nothing was safe except perhaps the disk based software package. A very useful package if you wanted a backup of your software collection as this whiz bang cartridge made it possible, and it also made loading 10 times as fast. No wonder *Isepic* sold very well.

Summer Games II was released and many a person strove diligently through the spring trying to outdo those world records. *Skyfox* was also released - a popular buy for the C64.

Elite, one of the best computer games ever in my and many others' opinion, was released on the C64 and started up an almost cult following of enthused intergalactic traders. I can't wait for it to come out on the Amiga, that will be something to see.

October 1985

Again Andrew Farrell has changed his image, to the straight-out-of-school look. Wearing a white shirt with a crooked collar and a ragged white sloppy joe, he tried to appeal to those in a school atmosphere - no, it won't work, the mirror sunglasses



es just don't inspire trust. How can the public believe in the editorial of a man who conceals his face, the very window of his soul.

Even with setbacks the home computer scene managed to fight back with the release of some new and very interesting software. *Spy vs Spy II - The Island Caper*, which not only pleased the average game player but MAD magazine reader as well. *Kennedy Approach* was released with exceptional response from the media, who said it was one of the best simulations ever released.

November 1985

Cockroach Turbo-ROM came into commercial existence this month just in time for the Christmas buying pandemonium. The Turbo-ROM is a smart little ROM indeed, speeding up loading, saving and verifying by a factor of five and formatting by a factor of three. Also a complete DOS wedge has been incorporated in the ROM to make life a lot easier.



More news on the Amiga hits the scene and people are starting to get very excited about this new machine.

On the game scene, another movie conversion had made it big in the computer entertainment world as well as on the big screen - *A View to a Kill*. Also the next in the sequence of Olympic style games came out, appropriately *Winter Games* arrived just at the beginning of summer.

January 1986

With the arrival of the Amiga into Australian waters comes much fuss and excitement, with many hailing all sorts of technological revolutions because of this silicon wonder. Of course, there

were those ignorant people (I came into this category at the time) who just wanted to see the amazing new games that could be played on the Amiga - how shallow!

Yet another movie conversion to computer format - *The Goonies*. Our old favourite, *Zorro*, also made his way over to the C64 format to prove that sword play was still alive and kicking.

February and March 1986

Hardball made its big splash (or should I say hit) on the market and was famed as the best baseball game on the C64. *Never Ending Story* made it to the C64 market and, as do most movie conversions, sold well.

Monty on the Run, the sequel to *Monty Mole*, sold better the original and this is probably something to do with the vast improvements in music and playability - *Monty* can also do funky somersaults.

Hacker gave all those caught in the *Wargames* fantasy a chance to live out their dreams as a computer hacker and for the rest of us it was a chance to play quite a good little game.

The C128D hit the stores and proved to be such good value and sense that even Commodore didn't expect such a big demand.

April 1986

This month saw the arrival of some of my personal favourites, such as *Paradroid*, *Racing Destruction Set* and *Frankie goes to Hollywood*.

The above events took place over the first 24 months of the Commodore 64's life which we so fondly remember. This represents about half of the Commodore 64's existence, the half which we personally found the most interesting and without a doubt the most exciting.

Don't be fooled however, there is more life left in the good ol' 64 yet. I don't expect that we shall see the end of this amazing piece of technology for quite a while. ■

Double Image II

This is an Australian-made disk and file copy system, by Sector Software for the Commodore 64/128.

A review by Eric Holroyd

B EING PROGRAMMED and made here means that it's set up especially to cater for both Australian and European computers (which have a different timing system to the American ones). *Double Image II* comes complete all on one disk and is itself copy-protected.

The manual instructs you first of all to disconnect all peripherals and remove all cartridges as those things would interfere with the loading of the program. I did that and also had to switch out the Cockroach TurboRom. This didn't matter as *Double Image II* has its own fast-loading routines and in pretty quick time the disk loaded in OK and I got a very nice animated title screen complete with catchy music.

Loading then continued and I was presented with a comprehensive menu (again with some nice animated effects) offering the various copy programs and other utilities. Here's that selection:

- A - Nibbler.** For copying tracks 1-35 with automatic density scan.
- B - 1.5 Minute backup.** For non copy-protected disks.
- C - Parameter menu.** Specific bits of copy-code for various titles.
- D - Super Parameters.** Special codes for nominated heavily protected disks.
- E - File Copier.** For single file transfers.
- F - Super Nibbler.** Duplicates heavily protected disks. Needs optional cable.
- G - Dual Nibbler.** Two drive version of the Nibbler.
- H - High Nibbler.** For copying

tracks 36-40.

I - Disk Eraser. Returns a disk to its un-formatted state.

J - Compactor. Reduces file size. Can also "encrypt" a program for safety.

With the exception of "G" the routines are for use with a single drive system. I tried out most of them and they all seemed to work OK, with speed being somewhat slower than some of the disk-copiers that I've seen from the USA.

In spite of the longer times needed to copy a disk, the fact that a reliable backup can be made is probably the all-important "bottom line", so the time you spend in making the backup would be a good investment anyway.

The Nibbler copiers are highly intelligent ones, which accounts for the longer copy times, and they apparently do a more thorough job of analysing each track being read than do a lot of the copy programs from overseas.

The instructions refer specifically to many of the current software releases and tell you which program to use to copy it and how to use the appropriate parameter to permanently de-protect it. Over 200 parameters are included, all of which are designed (as I said above) for Australian and European computers so you know they're going to work.

The "disclaimer" in the manual states that the manufacturers deplore software piracy and market this disk system purely as a means to make your own legally-allowed backups which should even then only be used by you personally.

Distribution of such backups, whether for profit or not, is piracy and is a

contravention of the software owner's copyright. Nevertheless, some of the current copy protection schemes make loading very difficult on a drive which is only marginally out of alignment, and Sector Software claim that a backup made with their software will load easier and quicker and also prolong the life of your disk drive due to making its work less difficult.

Disk Eraser is a useful utility as it returns a disk to "virgin" state, ie un-formatted. This allows re-formatting for further use, a process not always possible on a disk which has become corrupted for one reason or another. I salvaged a disk with this program which I was just about to consign to the garbage bin, being unable to format it due to corruption.

Another useful utility is the Compactor which lets you squeeze down the size of your own programs and which offers the option to "Encrypt" the finished file as a protection measure.

Instructions for using the various sections of the copy system are easy to follow with good results assured.

Sector Software have an update policy and they're apparently working on other items which are soon to be available. These include: a Digital Track Gauge, Double Image Update disk I (more parameters), Isepic Plus, and the Parallel Expander cable for menu option "F" above. Some or all of these may have been released by the time we go to press.

Double Image II is distributed in Australia by Computermate Products (02) 457-8118. It's available at \$55 RRP from good retailers everywhere. ■

A review by Eric Holroyd

Animation Station



THIS ONE IS TERRIFIC! The name doesn't really explain what it is and what it does so let me enlighten you.

First and foremost it's a "Computer graphics sensor pad" which takes over where the KoalaPad left off. I've used a KoalaPad for the last couple of years, both for drawing and for adding to (or otherwise altering) pictures captured with the Cockroach Graphics Utility. I enjoy playing around with graphics and the Animation Station has made it even more fun now.

For a start it's a very robust piece of equipment. It's made by Suncom (who make those excellent joysticks) and features a working surface marked off into a

"The Animation Station will enhance your graphics capabilities and make it more fun too."

grid pattern and with a pair of "action buttons" on either side of the touch-pad. This ensures, by the way, that left-handed folk can use it just as easily as right-handers. To make it even easier to use, Suncom have provided a little fold-out "easel" at the back of the unit so that you may prop it up at an angle if you prefer working that way. Of the two

pairs of buttons the bottom one is the "DO" button, the top one is "UNDO". Simple!

Use the stylus provided to point at something you want from the menu, then press either bottom button to load it.

The software provided with the Animation Station is called the *Design Lab* and is very similar in layout to *Blazing Paddles*. Not surprising as it's written by the same guy, Sean McKinnon (he also wrote my wife's favorite C-64 game: *Mummy's Tomb*), and is copyrighted by the same software house - Baudville.

So, if you're familiar with *Blazing Paddles* you'll know all about the software already. If not, it'll take you all of

three minutes to start drawing with Animation Station/Design Lab. It's just that easy to get started.

Design Lab has all of the usual drawing program features: Lines, Boxes (plain or colour-filled), Dots, Fill, Zoom, Ovals, etc etc, and lets you draw with a wide variety of "Brushes" (actually different tip sizes), and in a great range of colours. There's a nice feature in the colour menu which lets you "mix" two colours into a "textured hue" which is actually a striped or dotted pattern mix of the colours you chose. Some really great effects are possible with this feature.

There's a "spray-gun" on the menu too, which lets you spray with colour to get the degree of shading you want, very handy it is too. Then there's a feature not usually found, and that's the "text" feature which allows you to put text onto the screen anywhere you like and in a

good selection of "fonts" or type-styles. Bold, Italics, Gothic, Script & Standard are just a few of the fonts on the disk.

Also, there is a nice library of "shapes" on the program disk which can be loaded into memory and used either to build a picture from scratch or to enhance a picture you've already captured or created. Shapes include: Animals, Tools, Face parts, Weapons, Vehicles etc etc and any shape loaded may be rotated or enlarged before placing it anywhere in your picture that you want it.

Talking about libraries, you may build your own library of "windows" with the Design Lab software as it lets you "Cut & Paste" any section of a picture as well as saving it to your data disk for future use. Handy if you design your name tag or signature and you wish to add it to pictures that you create. You may get a hardcopy of your picture by

pointing at the printer icon and following the prompts.

The software supports a good range of printers including: Commodore 1525, Gemini 10X and 15X, Epson 80 and 100 Series and Okimate printers (both black and white and colour versions are supported). Cardco and Buscard printer interfaces are supported and it's a simple matter to get a printout. Most users will find a combination of the above will be suitable, for instance I got a good printout on the Star NX-10 with Xetec Super Graphics interface by selecting CBM 1525/Cardco. Experimentation (as always!) is the key to this kind of printer selection. All in all, the software provided with the Animation Station is very good and I liked it a lot.

The master disk has a few more goodies on it including some ready-made pictures (Colourwatch, Micrometer, World-

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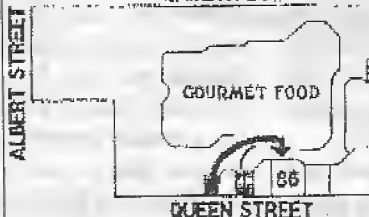
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map and Authors) for you to view and/or manipulate. There's also a program which will convert your Koala pictures to *Design Lab* format so that you can use the extra features provided in the software.

Also, if you're a Basic programmer wishing to display Animation Station pictures there's a handy program supplied on the program disk which may be used as a subroutine in your own programs. I tried it and it works well. It's well-commented with REMs so it's easy to use. There's even a printer dump to do a graphics printout on the Commodore

the pad the cursor will automatically centre and to ensure complete accuracy there are two "fine adjustment controls" on the back of the pad housing. It works with literally thousands of games designed to use joystick or paddles as controls.

The Animation Station is a useful business graphics tool too! With it you can create very effective bar charts, pie charts, lively graphics and plans etc. The package containing the unit and its software etc is full of actual examples all produced with the unit.

I'd mentioned earlier that the *Design Lab* software is quite similar to *Blazing*

"This is a great outfit for any computer hobbyist who's at all interested in graphics."

as you can buy it currently for \$30 less than that.

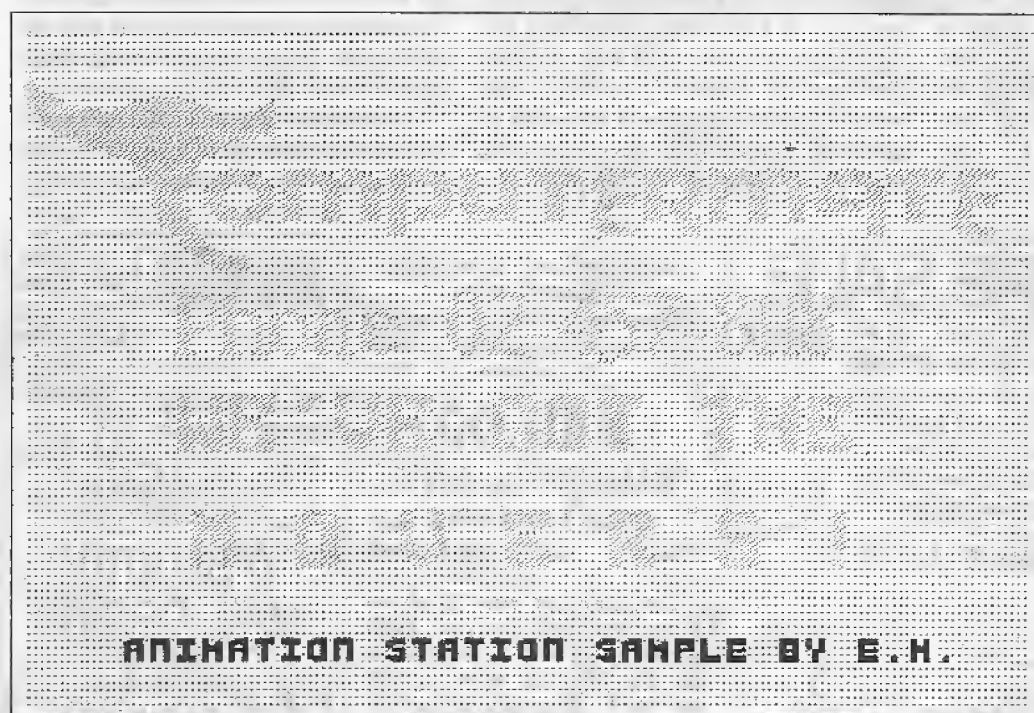
If you're really into graphics you'll know already that it's great fun converting pictures from one format to another, altering them in some way, then perhaps converting them back to the original or perhaps some other format. Design Lab, Blazing Paddles, Koala etc are all "multi-colour" format pictures whilst Doodle pictures (and some others) are in the "Hi-Res" format. If you need a graphics conversion program to do any of this I believe Computermate Products has just such a program in the pipeline.

Conclusion

All in all this is a great outfit for any computer hobbyist who's at all interested in graphics. I know there are many people out there who, like myself, play around with pictures "grabbed" with one of several cartridge systems which allow the capturing of C-64 screens. I mentioned above the Cockroach Graphics Utility

which does a great job of capturing screens. The Expert Cartridge (also from Computermate Products) allows picture capturing (and a lot more!) as does the Super Snapshot which I reviewed in the February 88 issue of Australian Commodore Review. The Animation Station will enhance your graphics capabilities and make it more fun too.

Animation Station is available at good computer shops at \$169.00 RRP. Australian distribution by Computermate Products (02) 457-8118. ■



1526! All you do is save your picture to a datadisk, then load this program and follow the prompts. Very useful for those 1526 owners who can't do graphics printouts of their favourite pictures.

On the front of the touch-pad is a small switch which, when in the down position, allows the Animation Station unit to emulate a video game controller! The bottom buttons then act like fire-buttons and you steer/guide with the stylus on the pad. If you lift the stylus off

Paddles and when I loaded in the latter to check it out it worked beautifully. I checked out also Suncom's claim that Animation Station will work with Koala Pad software. It sure does, which makes the unit just so much more versatile. The Koala Pad itself is no longer available and I believe that it's out of production. The last price I remember on Koala Pad here in Sydney was \$195 and that was a year and a half ago. That makes Animation Station even more attractive

Australian

Amiga Review

Word processor - Textpro

Expanding Your Amiga

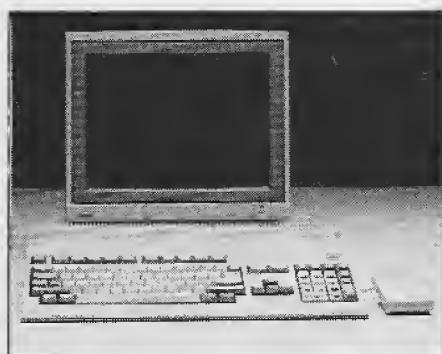


Game Reviews:

- Time Bandits
- Return To Atlantis

Xerox 4020
colour printer

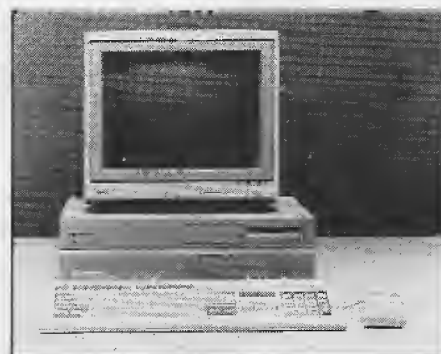
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REC. RETAIL PRICE \$999 excluding monitor	MEMORY 512K internally expandable to 1Mb	MULTI-TASKING yes
COLOUR 4096 colours	SOUND 4 independent stereo channels, built-in music and voice synthesiser	IBM COMPATIBLE no
SOFTWARE More than 500 commercially released programs available		



AMIGA 1000		
REC. RETAIL PRICE \$2495 excluding monitor	MEMORY 512K internally expandable to 9Mb	MULTI-TASKING yes
COLOUR 4096 colours	SOUND 4 independent stereo channels, built-in music and voice synthesiser	IBM COMPATIBLE yes*
SOFTWARE More than 500 commercially released programs available		



AMIGA 2000		
REC. RETAIL PRICE \$2999 excluding monitor	MEMORY 1Mb internally expandable to 9Mb	MULTI-TASKING yes
COLOUR 4096 colours video interface	SOUND 4 independent stereo channels, built-in music and voice synthesiser	IBM COMPATIBLE yes*
SOFTWARE More than 500 commercially released programs available		

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*Optional

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AMIGA

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Editorial

AMIGA SOFTWARE is taking a turn for the better. Not only have prices dropped considerably, but some really original titles have appeared. New themes with fandangled graphics and music, and multiplayer options that only the Amiga could make possible. This month we take a look at two new big titles, *Time Bandit* and *Return to Atlantis*.

We also welcome Tony Pilgrim, our new financial and business applications columnist, kicking off with a look at *VIP*.

And in the sock removing department is a special story that appeals mainly to the rich but is of general interest to all, on an amazing new colour ink jet printer.

Phil Campbell, of *Sydney Morning Herald* fame, continues our hunt for word processors with a review of *TextPro*. Several other alternatives have also just been released, which we will be examining in coming issues.

Until then, enjoy.

Andrew Farrell

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6. **Time Bandit** - A game that spans time, space and episodes of Star Trek.
8. **Textpro** - A word processor with a lot to offer
14. **Return to Atlantis** - Right wrongs and find treasures in the deep blue sea.
16. **Number Crunching** - VIP Professional
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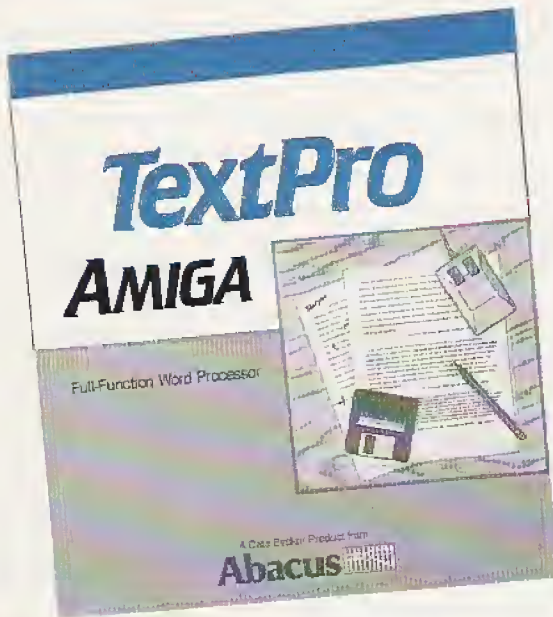
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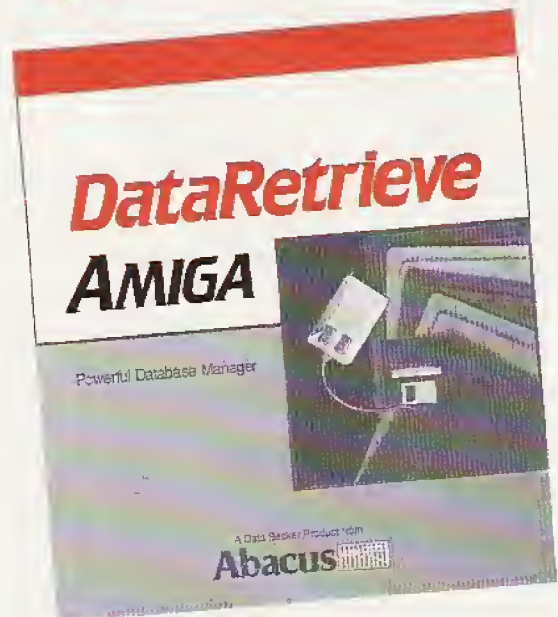
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Notepad



Notepad

New developments

Commodore engineers are said to be close to a new Denise chip for the Amiga that will deliver 640x400 non-interlaced video. Initial reports say that all past Amigas should be able to upgrade to the new chips when they become available.

Meanwhile, the Really Fat Agnes chip (which will expand chip RAM accessibility to one meg, among other things) is very close to release. A500 and A2000 owners will be able to upgrade, but the new chips are incompatible with the A1000. It's not clear whether it's just a problem with the physical board layout, or whether it just plain won't be adaptable to the A1000 at all.

Though Atari ST sales are said to remain strong in Europe, they appear to be dying on their feet in the U.S. With the response to the Mega STs so flat and developers bailing out of ST development, it looks like the 2600 Game System will remain Atari's best-selling "computer".

New user group

We recently received the following letter:

"I am just starting up an Amiga users group in Perth. My aims are to help all the members out with their problems, and to provide a good service to the members, for the cheapest possible price.

"To keep the cost down, I have made the membership fee \$5.00 per annum. You can buy the newsletter separately for 50 cents, and we meet on the first Sunday of every month. We keep a certain amount of disks in stock,

which sell for cheap prices (\$22).

"We have a tutoring service for new Amiga owners who want to know more about the computer. And the few members that we have are willing to help out and do different things, like tips on adventures, helping out on programming, graphics, sound. We have over half of the public domain library which is free, no media costs or anything. Oh, and if you were wondering about the name KalAmiga, Walliston is about 1km east of Kalamunda.

"I hope you will be able to help me acquire new members for my group as we are desperately lacking them in our first month of operation.

"Shannon O'Rourke, KalAmiga Users Group, 7 Norma St, Walliston, WA 6076."

Photon Paint

Microillusions announced this week the release of *Photon Paint*, a third generation graphics program. They say it has the following features:

- 64 colour palette with 4096 colour alternatives
- state of art surface mapping
- sophisticated brush operations
- real-time operation of drawing tools
- allows Ham to modify colours
- total menu movability with brush and colour palette menu size reduction
- light source specifications
- palette colour spread with both (RGB) and (HSV) functions
- compatible with most third party art and animation systems, including *Photon Video*.

This looks like quite a pow-

erful package and we are keen to get a closer look at it.

Distributed by Questor (02) 662 7944.

Photon Video

Also from Microillusions is *Photon Video*, the video cell animator.

Using cel animator you create each drawing only once, then by identifying the frame by number it can be called up at your discretion. The equipment allows for continuous play, processing and editing, even allows digitized sound effects or pre-recorded tracks to be added frame by frame.

Photon video products are fully compatible with most third party art, animation and rendering software systems.

Distributed by Questor (02) 662 7944.

Neriki video interface

The Neriki Image Master Pro GENlock, a video interface device allowing Amiga-

graphics to be manipulated on video, is entirely designed and manufactured in Australia. It is said by the manufacturers to be a price and function breakthrough in providing the means for PC-generated graphics, characters, titling and animation to be synchronised with ordinary video images. At \$2695 (ex tax) it is much cheaper than current professional equipment.

It operates at a resolution of more than 600 lines, giving full broadcast resolution and full broadcast encoding. The interface operates with 1/2-inch, 3/4-inch and 1-inch formats, and handles either PAL or NTSC standards.

For further information, Neriki Computer Graphics Pty Ltd, (02) 957 4778.

Polaroid Palette interfaces

Also from Neriki is the Image Master Polaroid Palette Software System which allows connection of the Polaroid Palette image recorder to the

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Amiga (and to the Atari ST).

It provides the means of transferring images from the Amiga onto full colour 35mm slides, prints or overhead transparencies. The system is mouse driven for ease of use.

The Neriki Software System supports on the Amiga 32 colours in LoRes and 16 colours in medium or high resolution (640x400). Image Master also utilises the advanced Hold-and-Modify (HAM) mode of the Amiga, giving the ability to manipulate 4096 colours.

An on screen print colour adjustment is incorporated in the software.

For further information, contact Neriki on (02) 957 4778.

Jet

A simulation type, top gun combat game by Sublogic. What makes this so special is that the U.S. defence used it to help train their fighter pilots in combat simulation.

Fly the most technically advanced fighter planes, the

F-16 fighter Falcon or the navy's newest multi-role fighter. The screen shows full instrumental controls and superb 3-D graphics environment.

The player can choose between several excellent vantage points. The cockpit, a spotter plane, tower, full screen, map and missile-eye viewpoint.

The player in the jet can choose a free-flight mode which takes combat over sea or land to attack various tar-

gets, or match the skillful computer's MIG21 and MIG23s. These machines definitely don't give second chances!

The player has a deadly arsenal of weapons with special radar, automatic tracking computers and just in case an ejection seat.

A game which is very realistic, and demands skillful play.

Watch for a full review in the next issue.

Distributed by Questor (02) 662 7944, RRP \$119.95.

Word Perfect

I recently purchased an Amiga 2000 and although I have had many years' experience using electronic typewriters and word processing machines, computers as such are new to me. I therefore find your magazine an invaluable source of information and help.

Word processing is very important to me as I earn my living doing just that, so your article about *Word Perfect* was extremely interesting. I purchased this package on the strength of everything I have read about it including a review in *Amiga World*, *Your Computer*, *Australian Commodore* and *Amiga Review*, *Amiga Annual 1988* and others. Apart from some minor criticism about the speller I thought I was making a very wise investment.

Admittedly, buying and researching software is a new experience for me but for the sake of other readers in the same position, I cannot emphasise strongly enough how easily one can be misled. One of the features of *Word Perfect* is described as "border draw" accessed by Ctrl-F3. In my ignorance I thought this was the same as the IBM ver-

sion of *Word Perfect* named "line draw", also accessed by Ctrl-F3.

Unfortunately, boxes can only be made with characters in the Amiga version of *Word Perfect*, unlike the IBM version which actually draws lines. I knew, of course, that *Word Perfect* was not a true WYSIWYG system. However, I assumed, wrongly as it turned out, that a "preview" feature would exist as on the IBM version.

I have no doubt *Word Perfect* for the Amiga deserves some aspects of the glowing reports it receives and probably serves its purpose admirably for most people. I'm afraid I bought it before I discovered that it did not have the features which I particularly wanted.

By the way, please tell me if there is a way I can draw lines with *Word Perfect* (I have a Toshiba 3-In-One Printer).

Marjorie Robertson, NT

Ed: Remember that the above feature in *Wordperfect* Amiga is called *Border Draw*, not *Line Draw*. The *Border draw* feature helps you draw boxes, graphs, borders and other illustrations using char-

acters. Using the arrow keys to move the cursor, you can draw in a clear window, or around and over existing text.

Border draw operates in the *Typeover* mode. When the cursor passes through existing characters, they are replaced. Any codes in front of the cursor are pushed forward.

Refer to the *WordPerfect* Amiga manual, page 313 in the *Reference* Section.

You may find that by condensing your border draw to 8 lines per inch that the printout will look more presentable.

There is an indepth review of *Word Perfect* on Megadisc 6.

Pricing outrageous

I am writing to enquire if you could shed some light on why Amiga software is so outrageously expensive in Australia.

I came over from Scotland last year and I can't believe the prices for software. The games are two and three times the price of what they should be. Take for instance *Karate Kid 2*. Going price in Britain £15 (\$33 Aust.). Price here \$80. How can the shops get

away with it? Don't they realise that if they sold their games at half the price they are charging, then they would sell a lot more? As long as they charge these prices then they have got a bloody cheek to complain about piracy. I know piracy happens in Britain but not to the same extent as here.

Do you know of any Amiga groups in the Sydney area and also do you know if an Amiga 500 bought here would work in Britain?

Well that's everything off my chest. Keep up the good magazine.

Roy McCarroll, NSW

Ed: Software pricing is certainly a very sensitive issue with everyone blaming everybody else. Prices should start to fall by now. If not it could be time to do a little of our own importing!

An Amiga 500 bought here should work fine in Britain (you may have to change the position of the switch on the RF modulator).

There is a listing of Amiga User Groups in our issue of February this year. Sydney area groups are in North Sydney, Burwood and Dulwich Hill.

Xerox 4020 - colour ink jet printer

by Andrew Farrell

INK JET printing technology has been around for some time. Unlike conventional printing, the ink is propelled from small nozzles, rather than pins physically striking a carbon ribbon. The process is exceptionally quiet, and involves fewer moving parts. However, ink jet printers are inherently slow.

Improvements have been made. Using Drop-On-Demand ink jet technology, ink drops are generated by vibrations of piezoelectric transducers. Maintenance is down to an all time low, although it's still higher than average.

The Xerox 4020 Colour Ink Jet printer prints an acceptable 80cps in draft mode, using only black ink. In four colours speed drops to 40cps, still in draft. NLQ would be slower still. The figures are a bit iffy, but then the 4020 is not meant for churning out great chunks of text.

Coloured bar graphs, pie charts, and illustrations are its forte. You can even print directly onto transparencies.

The really exciting part is the potential to print in up to 4000 different shades of colour. That's only 96 short of

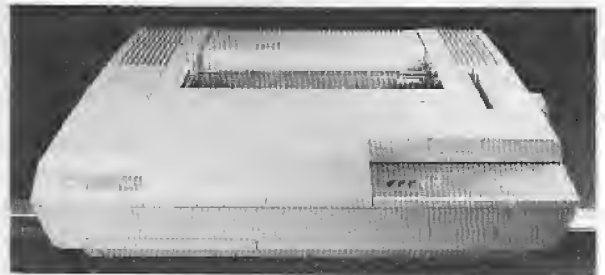
Amiga's own 4096 colour palette - don't ask what Xerox did with the difference.

Before we progress any further, I should mention that we're talking about a \$3999 printer. At that price you could almost afford a laser printer, so in real terms the 4020 has to win out with its colour capabilities. How good are they?

The results are exceedingly impressive. Good enough to frame, print onto a T-shirt or reproduce on the front cover of a computer magazine! Colour desktop publishing may also be a possibility.

Operation

Four ink cartridges are used, cyan, magenta, yellow and black. Each colour has four nozzles and black has eight nozzles, providing a grand total of twenty. Standard printing may be carried out in any one of seven distinct colours. By using a Diablo C150 printer driver, enhanced mode may be accessed providing the complete range of 4000 colours.



For best results, you'll need to use the specially coated paper available from Xerox. In fact, I'd recommend that's all you use. Most other papers allow the ink to run and smear.

Before starting continual use of the unit, it's necessary to instal the maintenance fluid - much the same as replacing a small photocopier's toner. You must then run the recovery cycle four times to ensure the ink is flowing freely, and that the ink jets are unclogged. A small button on the rear panel facilitates this process, which takes four minutes for each pass.

Next up you need to ensure that the ink wells are all full. Now the idea of topping up an ink well may sound a messy job, But surprisingly it is very clean and simple. A small canister slots into the reservoir, and with a gentle push, the ink flows into the printer. No grubby hands or fouled up ribbons to worry about. However there is one snag, and one of our staff managed to fall for it. If you move the printer be sure to replace the rubber plugs or, as we discovered, the ink can easily spill out everywhere!

On the front panel there are the usual line and form feed buttons, as well as a start/stop or on-line button. LEDs display status for paper out, ready, power and the condition of each ink reservoir. A flat pressure sensitive panel is used - preferable providing the tactile feedback is positive, and it is.

At the rear of the unit is ei-

Black and white graphic printout on the Xerox 4020, reduced to two-thirds size



ther the centronics or RS-232 type connector, as well as a self-test and recovery switch. Two sets of dip switches allow language selection, print modes, font selection and LF/CR selection. Five fonts are available:- 10 pitch gothic, 10 pitch gothic italic, 12 pitch gothic, 12 pitch roman and 17 pitch gothic.

Print quality in text mode is fairly good, although somewhat slow.

The operator's guide included is well written, and there's also a getting started pamphlet - which unfortunately fails to

mention a few needed steps. We had some difficulty getting a consistent ink flow at first. However, once the recovery cycle had been run, all was well.

Power up and power down sequences are longer than usual with various self maintenance sequences being performed to the tune of motors and pulleys chugging away.

Overall the 4020 is a solid, well designed printer by any standards. The colour results were better than expected, with no telltale white lines, smearing or

glitches. Excellent quality, a touch better than the competition from Hewlett Packard - which has far fewer colours, be it at a slightly higher price.

For Amiga owners, the Xerox offers power to produce stylish business reports, colour graphics for presentations, mock ups, colour transparencies and the like. Already several users have plans to put the 4020 to good use, with several units on order already. For further information contact Computermate on (02) 457 8188. ■

Time Bandit

by Adam Rigby

a game that spans time, space and episodes of Star Trek

TIME BANDIT represents the best of all worlds, the distinct flavour of an adventure with the fast action of arcade play and the entertainment capabilities of a two player game.

You begin each leg of your venture from the Timegates. You move the bandit across the landscape which is dotted with landmarks, each representing a gate to a different time and place. By moving onto one of these Gates, you will be transported to a new land. The new playing field will appear, along with the name of the land.

Each land in the Timegates has 16 different levels: four major phases (1 to 4), each with four sub-levels (A to D). Each time you re-enter a land, you advance to the next level. As your skill increases, you will be able to go further into each land, seeing new areas, creatures, and situations appear. The name of the land and the current level are displayed on the bottom of the screen as you play.

The lands in *Time Bandits* are what set the game apart from other 3D style games. Everything from *Star Trek* to *Pacman* is included in this game and the style of play needed to succeed is always varied. To mention a few of the games included in this box of tricks, there is a *Star Trek* adventure complete with Spok, a Game of *Pacman*, a medieval adventure



called *King's Crown*, a *Ghost Town* and many more. All these can be played in one or two player mode.

When you select a Two-Bandit game, two people can play at the same time. Both will be playing in the same land, but each will have his own viewing screen - similar to most split screen games these days. In the two player mode you can either work with or against the other player, which can lead to some very interesting playing. Just make sure, if you decide to play against, that your opposition is willing to forgive and forget after the game is over. Some very nasty situations can develop from a sore loser - Amigas don't much like being thrown across a room into a fish tank.

The first bandit to die will return as a shadow. The shadow can haunt the other bandit, aiding or hindering his progress,

depending on how mischievous the shadow is feeling (this can be highly dependent on the circumstances of the bandit's death). The shadow can shoot other creatures (and the other bandit) and steal treasure, although his score will never advance. The shadow is temporarily stunned when hit by a creature or shot by the other bandit.

The concept and gameplay is not wholly new but the execution of them is indeed novel. The gameplay is fast without being taxing and the adventuring side of the game is simple without being boring. Seems like a perfect combination and it may well be. I enjoyed playing the game for quite some time, and it wasn't until Andrew prompted me to start on actual work that I realised how long I'd spent in the Timegates.

The adventure side of the game is simple but is quite entertaining, as you explore the *Star Trek* setting you view the *Enterprise* after it has been taken over by an alien force. The plot detail is reasonably good, as you can see by reading the Captain's Log - but I won't give any more away.

Time Bandit is a fun game that I am sure you will find much pleasure in. It comes recommended in preference to similar games that concentrate more on dungeon theme - this has the works. Distributed by OziSoft (02) 211 1266, RRP \$69.95. ■

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Textpro

by Phil Campbell

A word processor with a lot to offer

TEXTPRO, a new Amiga wordprocessor from Pactronics, offers a number of unusual features at a budget price. If you have been searching everywhere for a wordprocessor that automatically hyphenates, helps you to format C-language source code, and allows you to insert IFF format graphics in your text, then "this one's made for you."

But let's look first at *TextPro* as a simple wordprocessor. On loading the program, the first thing that you will notice is that the usual system font is not used. Diamond 10 is the replacement font - one of the system fonts that I like least. But that's just a personal preference.

Editing follows most of the usual point and click traditions of the Amiga, with a few minor exceptions. All operations can be selected by pulling down menus at the top of the screen - File, Edit, Style and Formatting menus are provided.

Editing functions are generally line and paragraph based - in other words, values selected are operative only within the specific line or paragraph for which they are activated. There are some good reasons for taking this approach. I just can't think of any.

In fact, let's air the dirty linen first - it's a real pain in the neck. Each paragraph must be individually formatted, and any changes can have a dramatic effect. At times formatting becomes scrambled, and it is necessary to press the "Help" key to reformat the entire document. This, mercifully, is fast.

Text enhancements work on a similar basis - underlining, italicising and boldfacing are only operative one line at a time. Thus, if you want to italicise a sentence that extends from one line to another, you will need to highlight the area on each line individually.

Having got that little grievance off my chest, let's be positive for a while.

Where, for example, have you ever seen a wordprocessor that lets daisy wheel owners with a two colour ribbon specify text to be printed in red? It's here, and it even prints the red sections in colour on the screen. Very impressive

Printing in fact, is what *TextPro* does best. I was immediately impressed with the range of printer files offered for selection at the start of the program. Even my three month old Star NX 1000 was included. And to top it off, the manual goes into great detail about creating your own printer files, allowing you to customise the program for even the strangest printer in the world.

This section of the manual made interesting reading, even though I did not have to modify a file - it is probably the best explanation of the intricacies of printers that I have yet found.

Graphics can be printed as an integral part of your documents; a simple Graphic Load command on the file menu imports any suitable IFF file with the correct suffix. A neat utility called BTSnap is included, which allows you to take a snap shot of virtually any IFF graphic screen. The program sits in the background waiting to be activated at any time. I loaded *Chessmaster 2000* and took a snapshot of the 3-d chessboard - easy. Then I reloaded *TextPro*, imported the graphic file and printed it out.

Three graphic print modes are supported - random shading, raster, and black and white. All three are subject to the age old problem of representing 4096 possible colours on a dot matrix printer with a single black ribbon. Random shading made a pretty decent stab at things, but for professional results I suggest you use monochrome pictures - simple line drawings and diagrams would be a snap.

This feature in itself may make *TextPro* a worthwhile proposition for many buyers. While not quite a fully fledged

"Desktop Publishing" system, it still has plenty to offer if you are putting together newsletters or other illustrated documents.

"C-Source Mode" is another unusual feature. If you are a C-Programmer - meaning, if you have rocks in your head, or a Spock-like brain - this option helps you write nicely indented and formatted code. I didn't try it, because C-Programming scares me witless.

Auto-Hyphenation is an unusual feature to find on a budget priced word processor. Using a set of grammatical rules, the program hyphenates long words automatically, and seems to pick suitable spots to do so. "Immediately", for example, became "immedia - tely", which is fine. Sometimes, however, I tend to disagree with the program's idea of what constitutes a "long word" - four letter words split over two lines look a bit odd. But if you don't like the results, you can either turn "Auto-Hyphenation" off, or manually override specific words.

Function keys can be redefined as text and command strings with a maximum length of 160 characters. Thirty definitions can be stored using the function keys in combination with the SHIFT and ALT keys, making this a remarkably powerful feature. For a small mail merge operation, for example, you could easily assign a name and address to each of the 30 function keys - or you may like to reconfigure the whole command structure of the program, and operate everything with function key sequences.

TextPro is unusual. It offers much more than expected in most areas, but is constrained a little by clumsy editing and formatting functions in others. Even so, at a recommended retail price around the \$150 mark, the program is good value - especially if you are convinced that a picture is worth a thousand words.

Distributed by Pactronics, (02) 407 0261, 33-35 Alleyne St, Chatswood, NSW 2067. ■

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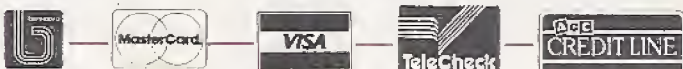
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AD	Adventure	U	Utility
H	Home	A	Art & Graphics
BU	Business	M	Music
ED	Education		



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Return to Atlantis

Adam Rigby, a man rumored to be involved with bottom of the harbour schemes looks deeply into this new undersea software from Electronic Arts.

IN THE FOOTSTEPS of James Bond and the Man from Atlantis you can pioneer, right wrongs and find treasures in the deep blue sea. Fresh out of the Academy, you're the agent who shows the most promise. Daring deep-sea diver, undersea warrior, expert marine biologist and high-tech explorer (or so the blurb says) - sounds like enough qualifications to rival Gareth Powell at the end of a snorkel.

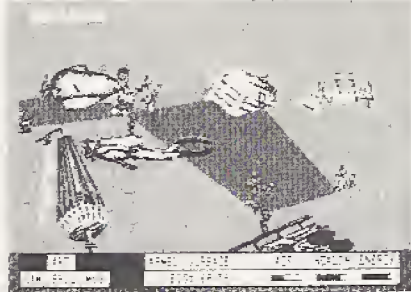
Being an agent of the Foundation your purpose is to help maintain the balance between the forces of land and sea; to protect the creatures that swim in the ocean waters; and to oppose all those who seek to exploit the sea's wonders at the expense of the ecosystem - a very noble cause indeed.

From The Foundation's base on Isla Perdida, you receive your assignments from headquarters through a holographic projection from The Foundation's head agent. Headquarters gives you details of the mission and points out any dangers you need to be aware of.

Once your briefing is complete, you go to the Sea Thief Cafe on Isla Perdida. This is the hot spot for buying and trading secrets. Here, you question the mysterious informants for leads that can help you with your mission. After you've collected your leads, a map of the world appears and a red line traces the flight pattern of your ship, the *Viceroy*. When you reach your destination, the *Viceroy* lands and your mission begins. During your

mission, ART, your onboard computer, keeps you posted on your status. If you fulfill your objective, ART gives you information about the mission just completed and about your next mission. If you don't succeed, ART outlines the effects of your failure.

Also at your disposal is a robotic drone, RUF (Remote Underwater Friend), who can help in your searches throughout the game. RUF can manage to search for specific properties in order to locate various items, for example RUF can try to locate Chemicals, Temperature Change, Radioactivity or Metal. The more of these characteristics that are searched for, the more of your precious mission time is used up, so it pays to be conservative.



you will start over again from scratch. Seven attributes control your alter-ego's abilities, these include:

Psychology The informant's behavior towards you. Being strong in psychology makes it easier to get information because the informant will be more receptive. You can develop this strength by studying the informant's behavior and using the right methods to question him or her.

Athletics Your underwater maneuvera-



bility and your ability to swim against the current.

Telepathy The maximum range at which you can communicate with RUF, your underwater robot.

Awareness Your self-awareness. The greater your awareness, the slower you'll use up your oxygen supply, and the less you'll have to interrupt your mission to surface for air.

Programming Your ability to program RUF to search given coordinates. Strong programming skills let you program RUF to search a larger area for each minute invested.

Weapons How well you load and fire your weapon. This is critical when you're confronted with enemies.

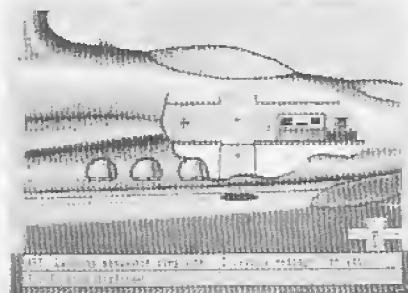
Health Your overall well-being. All agents begin with 100% health, but that can change according to what you do and how you perform your tasks. Health affects all your attributes. For instance, if you're at 50% health, all your attribute values are reduced by 50%; you will use air twice as fast, your range with RUF is cut in half, and so on. When it's down to zero, it's time for you to change your identity and start your career over again.

Once you reach the dive location you have various tools available to make the searching process more productive; such as the scanning device that ART has made available to you. Also there is the equipment room where you can equip yourself with any useful tools that you might have found during previous missions - some of which are necessary to

complete later missions.

If you have missed the tool after having completed the mission you may rerun that particular mission to find the tool in question. No experience is awarded for the mission but you can be injured.

To cure any wounds that you may incur due to undersea attackers you have a medical chamber at your disposal that replaces health points in exchange for experience. So if you ever



use up all your experience points in healing yourself you will be up the creek without a regulator (that's dive talk).

Whilst you are underwater you are presented with a three dimensional view of the ocean floor complete

with a variety of plant and marine life. The perspective is quite good, allowing the player to experience the feeling of being underwater complete with the claustrophobic bubbling sounds coming from your diver. Movement is controlled through either the joystick or the mouse - surprisingly the joystick was no better than the mouse.

Communication with ART and RUF are carried out through a control panel on the bottom of your screen which also shows your Health, Air and Energy. Communication with these two robotic friends is vital because they can provide useful information not about the only location of yourself and other objects but the nature of other objects which may not always be visible.

ART has the ability to beam things up and down, this is your method of recovery and in some cases it may be necessary to beam an object down in order to complete a task. To complete the game you must have a full understanding of how to use these robotic friends, ART and RUF, as they are the key to your submerged success.

The game spreads itself over fourteen missions, the first of which is a simple search and recovery. The missions get progressively more difficult until you must negotiate the source of all the problems you have been facing. Your last mission is to return to Atlantis - the mission brief doesn't give much away but as far as I can tell from the documentation you will return to Atlantis with a colleague of the Academy.

Having completed the first two missions I can say that this is a good game indeed and especially good if you are into undersea activities. Electronic Arts have managed to capture another piece of innovative, interesting and entertaining software. *Return to Atlantis* is distributed through ECP at a RRP of \$83.29. ■

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Number Crunching

Our new resident business software analyst, Tony Pilgrim, shows us around the current market in the coming issues, beginning this month with

VIP Professional

THE NUMBER of business application programs available for the Amiga continues to grow. A recent survey of Amiga retailers showed that the following business packages are available:

Best - an accounting package \$699, *Lattice Unicalc* \$199, *Analyze* \$200, *Logistix* \$299, *Maxiplan 500* \$249, *Maxiplan Plus* \$299 and *VIP Professional* \$299. This article looks at the features offered by *VIP Professional*.

One of the most valuable programs for business use is the spreadsheet. A spreadsheet can be likened to a word processor for numbers, in that numbers can be moved around the screen and edited.

In fact a spreadsheet is much more powerful than this, and it is ideally suited for applications where a table of figures are used for calculations and where changes need to be made in the table and new totals calculated.

However the uses for a spreadsheet are by no means confined to business, there are many applications for it in the home. Some of these are student use, home budgeting, use as a database for videos or audio tapes and as a register of your software. In fact any list that needs to be calculated, updated, sorted or accessed.

One of the recognized standards in spreadsheets is Lotus. Lotus is a spreadsheet package for business use which has achieved almost universal use and acclaim. Lotus uses a particular standard of screen presentation and offers a series of choices in the form of a menu at the top of the screen. This is quite an advantage because the commands available are constantly before the user.

A spreadsheet is like an imaginary

sheet of paper in the computer's memory. A very large sheet of paper which is ruled in columns and rows. Each column is labelled with an alphabetic character whilst each column is numbered. At the intersection of each column and row, ie the coordinate, there is a cell where numbers (values) or text (labels) can be entered.

With the Lotus standard the main menu has a subset of submenus offering more detailed use of the command involved. Another important feature of the standard is the availability of mini helps which appear at the top of the screen as the cursor is moved to each choice on the menu.

VIP 123 Professional uses the Lotus standard and in fact the programmers acknowledge this in the manual. *VIP 123* is often called a Lotus clone but this by no means suggests any nefarious plagiaristic activity.

The first point to be made is that

VIP is not mouse driven. This however is not a disadvantage as all commands can be accessed by pointing the cursor using the arrow keys, or by pressing the first letter of the command involved, so the system is probably more efficient than using a mouse.

VIP is a powerful product as it not only offers spreadsheet functions but also graphing and limited database capabilities such as sorting in either ascending or descending order, and searching for records which match a certain nominated criteria.

A particular benefit of VIP is its compatibility with Lotus. As well as the ability to interchange files with Lotus by file transfer using a modem, I consider it a substantial advantage for any student contemplating a business career to know VIP as this knowledge can be used directly in an IBM environment operating with Lotus.

Another advantage is the availability of specialised books on Lotus and spreadsheeting in general, the information of which can be directly applied to VIP.

VIP offers a sheet of 8192 by 256 cells which means that quite a large table can be calculated. Of course this is dependent on the memory available. I have a 512K Amiga and after inserting a three digit value in each cell I found that VIP could operate with a sheet consisting of

	A	B	C	D	E	F
1	salestax	20%				
2	markup	40%				
3						
4	delivery					
5	per \$10	0.5				
6						
7	cost	sales	markup	delivery	total	
8		tax		charge	invoice	
9	400	+A9*B\$1	+A9*B\$2			
10	\$400.00	\$80.00	\$160.00	\$20.00	\$660.00	

Figure 1

about 800 cells.

When a sheet is constructed it consists of a table in the computer memory which may not be all visible on the screen at the same time. VIP provides a screen which shows 160 cells, as the sheet is 8 columns wide and 20 rows down.

As the sheet is set up, cells containing values are accessed by other cells which carry out calculations. An example of this would be where a sales record is being prepared. The user could have a column which would hold the cost of the product, other columns could show sales tax, markup, delivery charge etc.

Figure 1 shows a fairly simple example. I will refer to this to explain other features of VIP.

In fact this is a very basic example, as the formulae can be as complex as is required, and may access many other cells as part of the calculation, in fact almost any arithmetical calculation can be performed.

VIP spreadsheet features

— Formulas

Spreadsheets allow the user to enter complex formulas in any cell. What is displayed however is the result of the calculation. Cells B9 and C9 in Fig. 1 show some of the formulae which might be entered. Cells B10 and C10 show how VIP would display the result.

Note. The \$ sign used in B9 and C9 is part of the convention used by VIP to denote an absolute address rather than relative.

— Copy

This facility allows the user to copy whole blocks of the sheet. This means that where a formula has already been used it is only necessary to copy the formula to another part of the sheet where it is required. This also has the advantage that the movement is relative, ie cells which are referred to by the formula are still referenced although they do not move to the new location.

EXAMPLE. In Fig. 1 Line 9 could be copied as many times as required, so that although for each transaction the cost value is entered in Column A the formulae need only be entered once.

— Move

This allows the user to move blocks of the sheet around without affecting the results. So if a sheet has been constructed and it is realized that a table is in the wrong place on the sheet, it can be moved without affecting the results.

— Insert/delete

These commands allow the sheet to be changed by the addition or deletion of rows or columns, again there is no effect on the totals. EXAMPLE. If it was desired to insert rows between the labels and the first row of figures this could be done without altering the results.

— Column width

This feature allows the user to increase or decrease the width of a column. This would be useful where a figure is too large for the existing column.

— Erase

Allows blocks of the sheet to be erased just like with a word processor.

— Titles

This command is particularly useful if the sheet is larger than the screen (it usually is). This means that when the cursor is placed somewhere on a large sheet it is often possible for the user to become confused about just which column or row is being accessed. Not with this command however, either the row and/or column titles can be frozen so that they always remain on the screen, eliminating any confusion.

— Format

This command allows a range of cells to be set so that any amount placed in that cell is formatted in the manner set, eg. a certain number of decimal places, a currency sign before the amount, a per-

centage sign etc.

VIP allows the user to set the format of any number of cells and different formats can be used on the same sheet at the same time.

— Range names

This feature allows a range on the sheet to be named. This has the advantage that the operator does not need to remember where a particular formula is to reference it. For example if a series of cells are named "revenue" these can be found easily.

— Protect/unprotect

This command allows part of the sheet to be "protected" so that they cannot be altered accidentally by you or tampered with by an unauthorised person.

— Graphing

Remember your school days when you had to draw line, bar, and pie graphs by hand? Well, not any more if you have VIP. Graphs are a breeze. My 13 year old son was able to efficiently use VIP to do his graphs after about 10 minutes of instruction, and the graphs are well presented. There are sufficient commands to ensure that anyone can easily produce business graphs that aren't embarrassing to show to the boss or the teacher. VIP includes a print graph program to allow printers supported by preferences to produce a hard copy of your graph.

Functions

These can be likened to the functions that are found on calculators eg. even the simplest of calculators have a key which will calculate square roots. VIP can do much more than this, some of the types of functions include Statistical, Financial, Logical, and Math.

The functions given below are not intended as a comprehensive list of functions but provide an indication of the power of the package.

● **Statistics:** Sum, Average, Count, Min/Max value, Std. Dev., Variance.

● **Financial:** Future Value, Present Value, Payment of an Annuity, IRR, and NPV.

● **Math functions:** Exponential, Integer, Log, Rounding, Absolute Value, Cos, Sine, Tan, Pi, Random Number, and of course Square Roots.

Macros

An important feature of VIP is the macro function. Put simply, this allows you to program the package so that complex operations can be carried out by activating the macro. It is even possible to have an auto execute macro so that when your spreadsheet loads the pre-programmed sequence is carried out automatically.

Basically any of the VIP commands can be programmed into a macro. For example one macro could load data, copy some cells to other parts of the sheet, recalculate, then save the new data out to another file.

VIP even provides a single step facility for debugging macros.

Negative Aspects

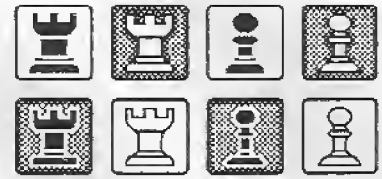
There are not many and these are relatively minor. Cursor movement down

the sheet using the down arrow is slow when compared to moving across the sheet. However there are a number of ways to move quickly around a large sheet including paging, and Goto which will go instantly to any cell.

Another complaint is that, at least on my 512K machine, the program loads in almost every command required resulting in a delay of a few seconds, apparently this is due to the Amiga's rather primitive disk access.

Another minor complaint of mine is with the Lotus standard itself. I would like to see a choice provided for absolute or relative copying in the copy menu. Admittedly formulas can be set so that they are relative or absolute so this is not a real problem.

VIP is an excellent program that comes with a 236 page spiral bound manual which is clear and concise, although in comparison to some other spreadsheeting programs at \$299 it is a little overpriced. However I would recommend it to any business with a spreadsheet requirement, or to any parent with children undergoing secondary or tertiary schooling who plan on a business career. ■



● users will be able to boot up from a hard disk or similar expansion device with complete compatibility with 1.2

● greater speeds of hard disk access up to 7 times faster

● hard disk partition limits are raised to 2 Gigabytes (!)

● graphics printing up to 6 times faster

● Colour-correction will be possible (ie, the printed output is the same colour as the screen)

● anti-aliasing for smoother graphics will be automatic

● the Maths library is faster and is configured for 68881 maths co-processor chip

● text output to the screen is much faster

● there will be a Recoverable Ram disk (ie, whatever's in the Ram disk will remain there until you turn the computer off)

● there will be new screen fonts as standard fonts (about time, considering those weird gem fonts)

● by use of AUX: a second person will be able to use the Amiga, thus bring multi-user capabilities to the multi-tasking Amiga

● there will be speech capabilities for most programs

● there will be numerous new commands for greater ease of use of the Workbench.

Now while many of these capabilities have been around for a while, such as the Recoverable Ram Disk, on the public domain, the new software will be integrated and bugfree and easy to use.

The decision to make this software upgradable was a wise one and benefits us the users. If Commodore had seen fit to release a copy to your dedicated reporter, you might have got some harder information - next time perhaps. ■

More on Version 1.3

the new system software

COMMODORE has just released Test versions of the new 1.3 software to registered developers, and it promises to be quite an improvement over 1.2.

For those who are new to the Amiga, a word of explanation may be required - most computers have their fundamental operating system software "burnt into" the innards, so that it just works invisibly in the background to let you compute.

When the Amiga was released this software had been written in a few short months and was far from being a finished

product, so the decision was taken to provide it on disk until such time as it was a final product. Hence early Amiga buyers received version 1.1 on their Kickstart disk which was upgraded before too long with version 1.2. This version found its way into the innards of the A500 and A2000 as they now are, but still has quite a lot of room for improvement. Hence 1.3 which should be available to A1000 owners on disk and to other Amigas on chip (one way or another).

Some of the features of the new software are (according to Commodore):



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Some interesting software packages

Pixmate

This is known as an Image Processing program - just as Word Processors process text and allow you to manipulate it in many ways, trying out effects, cutting, pasting and so on, so with this program you can import a graphic of any kind and subject it to all kinds of processes to (hopefully) enhance it.

These techniques were originally devised to enhance images sent back from NASA space probes and then to X-rays.

Some of the effects are - edge emphasis and contrast changes (good for digitised images); rainbow colour effects (solarisation); photographic negative effects; changes of size and resolution; tiling and turning your image into a mosaic; flipping on various axes; the list goes on.

Pixmate lets you devise effects which were until recently only available on very expensive computers, and it is a very stable program - I couldn't get it to crash, and the programmer Justin McCormick seems to have thought of every possible glitch.

If you're at all interested in graphics, you'll want to try this program - you can get dozens of different images by simply messing around with one.

Price: \$110 RRP

Availability: Local dealer, or Disk Works (02) 4362976

Superbase Professional

Currently out in its non-PAL version, this program is about to be released in PAL and promises to be more than just a successor to *Superbase Personal*, which was and is an excellent relational database for the Amiga and as powerful as many more expensive databases on other computers.

If you want an easy-to-manage database which has all the normal features, *Superbase Personal* will do the trick.

Professional however is another leap in power - it is a "programmable" database, meaning that you can customise it in many ways for your own purposes. You can create your own forms (invoices, reports, etc) according to a template you devise and fully integrate all that data that you spent so much time entering.

It will be ideal for small business owners who don't want to spend all their time on administration but still want a professional-looking result.

Price: \$500 approx.

Availability: Local dealer

What's on recent public domain disks

Public domain software keeps pouring out, and the standard remains high. Here is a brief overview of what is on the latest four Amicus disks which are put out in association with the Amiga magazine *Amazing Computing*, one of the best information sources for the Amiga.

To get your hands on these or any of the other 180 or so public domain disks, get in touch with your User group, or contact Megadisc (see ad this issue).

Amicus Disk #23

— 1. **Instruments** - noncopyrighted instruments used to play the demonstration scores on this disk. These IFF instruments can also be used in *Instant Music*, *Deluxe Music*, *Deluxe Video*, *SoundScape*, and *Sonix*.

— 2. **Music** - Songs that can be played with the public domain player *SMUSPlay* provided on this disk. The scores are limited because they are the only ones I could find that are not copyrighted songs. If you like the limited selection of music here, CAMEO suggests you buy one of the commercial music programs for which there are many scores are available in the PD.

— 3. **MCraft2SMUS** - This is a program to convert old Pre-Release ver-

sion *MusiCraft* scores to SMUS (an IFF standard). Once in SMUS they can be imported into *Deluxe Music*, *Sonix*, or others.

— 4. **1812Overture** - The full 1812 Overture by Tchaikovsky, since this is over 18 minutes of music complete with cannons your computer must have more than 512K of memory to play it.

— 5. **SMUSPlay** - This is a public domain program that plays songs in the SMUS format. It is used to play the songs in the music directory.

— 6. **ListINSTR** - A handy utility to list the instruments required to play a song. This is necessary because several programs simply say "Cannot find instrument", and do not tell you which instrument is missing.

— 7. **MStudio2SMUS** - This program converts *Music Studio* songs to the SMUS format. The advantages of this are described above.

Amicus Disk #24

BNTools - Three examples of Assembly language code: *Setlace*, *Why* and *Loadit*

Daisy - Example in C of using the Translator and Narrator devices to make the Amiga talk

CodeDemo - Modula-2 program converts assembler object files to inline CODE statements, comes with screen scrolling example

VirusCheck - Several programs for finding and eliminating the SCA virus, and an explanation of it

BoingMachine - Ray-traced animation, with Movie program which can play sounds along with the animation

AmiBug - Workbench hack

Sectorama - Disk sector editor, recover hard disk files, etc.

DGCS - Deluxe Grocery Construction Set...

bmon - System monitor AmigaBasic program

Moose - Random background program, Bullwinkle says witty things, user-definable

To be continued next month

About expansion devices *by Tim Strachan*

NOW THAT MANY people have had their Amigas for some time, thoughts tend towards getting extra pieces of hardware - RAM expansion, digitisers, hard disks and so on. Amigas love added peripherals, as they are open architecture machines, so the problems are A. the money and B. which one?

The first necessity for the Amiga is expansion memory. Anyone buying an A500 should automatically get the A501 expansion module to bring their Ram up to one megabyte, especially with the excellent prices that are being offered for it at the moment. A2000 buyers get their machines with one meg standard, but should consider another two megabytes if they will be doing any graphics-intensive work, such as Desktop Publishing or Animation. And A1000 owners have a variety of alternatives which have developed over the past two years, both locally made and foreign.

All Amiga owners should invest in an external disk drive too - because the Amiga looks for commands off the Workbench disk (system disk) it means that every time a command is issued to the system, that disk must be accessed, necessitating disk-swapping. This can drive you crazy. If you have another drive, however, you can keep the Workbench in the internal drive, and your application or data disk in the external drive.

And with extra memory you can add what is a "Virtual disk", ie, you can organise your system to set up a RAM disk which can act just like a normal disk drive (but faster), thus freeing up your internal drive and giving you virtually three drives to play with. Even that is not too many - I usually have three external drives along with a virtual disk and a hard disk. That may seem like overkill, but with the Amiga you can use them all to advantage. In short, anyone using the basic Amiga (512K, one drive) is running the machine at about 10% efficiency and convenience.

You can get either Commodore drives

at about \$400 or locally made ones at about \$340 if you shop around. It is also worth considering 5.25" drives for the Amiga - it is possible to get such a drive which can store 880K on the much cheaper floppies, and act just like a normal 3.5" drive (see Megadisc for details).

Having got your external drive and extra memory, you may begin to yearn

"Anyone using the basic Amiga (512K, one drive) is running the machine at about 10% efficiency and convenience"

for a hard disk. This is like a large and (fairly) reliable floppy disk, and has the benefits of greater speed, storage and convenience.

Sizes of these disks are anything from 10 megabytes to 500 (say 12 to 600 floppies), at corresponding cost. The convenience comes from having all your programs and data on one disk which is always accessible, so that you don't have to keep swapping disks.

Any serious computer user must eventually get a hard disk, and what with the Amiga's memory-hungry graphics and sounds, it would be worth starting at a 40 meg hard disk. However, if you get a 20 meg one, you can always add more.

To remember about hard disks - always do regular backups (I just spent a day trying to recover data from a crashed hard disk, and it's no fun). There are now some good hard disk backup programs available for the Amiga - a couple of public domain ones, which work but require reasonable knowledge of the CLI, and a couple of commercial ones, specifically *QuarterBack* by East Coast Software, which allows you to backup and restore with a minimum of pain and a maximum of mouse.

Approximate prices of hard drives (20 meg) hover at about \$1600 at present.

Then there are modems, with which you can access the many bulletin boards around the country. These are dropping in price quite rapidly to the point where

you can get a good 300/1200 baud modem for about \$350. There is a lot of information and good public domain software to be got on these BBSs, and you can also access databases, Viatel, some banks and other services whose numbers are growing.

You can also get "digitising tablets", on which you can draw, or mimic the actions of a mouse, though with a pen-like device. And speaking of digitising, you can find audio digitisers which can digitise sound samples for playback and editing.

There are other more exotic devices you can add to your Amiga - video digitisers such as Digi-View, which allow you to grab any graphic as an image on your screen; Gen-Locks, which are used to synchronise and combine the video output of your Amiga with any other video source; and very soon Frame-Grabbers which allow you to grab any instantaneous image from any video source, such as your video camera or VCR and turn them into graphics for further enhancement.

The main problem with all this of course is having the cash to pay for it all - these extras don't come cheap, and for the enthusiast they are very tempting. And you can be sure that more will become available, and that prices will drop as the number of Amigas increases.

Some contact numbers:

5.25" External disk drives - Mr P Chatfield (02) 9595804

3.5" Internal disk drives - Diskworks (02) 436 2976

RAM expansion units - Andrew Wilson (08) 2933960

RAM expansion/SCSI interface & hard disks - Megadisc (02) 9593692

Genlock and Polaroid Palette - Neriki (02) 9574778

Audio Digitisers - George Vokalek (08) 2941283

Modems (Bit Blitzer) - (08) 2870191



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| <input type="checkbox"/> C128 | |
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PLATOON

Most of you have seen the movie, now here is your chance to catch the computer game.

PLATOON IS similar to your average Commando style game - all killing, no thinking, although it does have some extra features that make gameplay a little different.

You must lead your platoon deep into the depths of the Vietnamese jungle and ultimately find the village. Once there, you will search the huts for useful objects and ultimately find a trapdoor in one of the huts that will lead you to an underground network of tunnels.

The jungle contains many perils such as armed patrols, booby trapped wires, assassins in trees and concealed "hides" where deadly snipers lie in wait. During your trek stay vigilant for a box of explosives left by a previous platoon, as

"You must lead your platoon deep into the depths of the Vietnamese jungle."

this must be collected before reaching the bridge which must be blown up to prevent a large patrol following you (and effectively wiping your platoon out).

Food, ammunition and medical supplies left by enemy guerillas can be picked up and used. For best results, spread supplies equally between the soldiers in your platoon.

After fighting your way to the village you must then search the huts for the entrance to the tunnel network. The objective of this section is to find two boxes of flares and a compass that are essential for the next section.

The next few sections are the concluding scenes that portray getting back to safety. This not unhindered with everything from betrayal to napalm getting in your way.

This game is full of action, however, the fact that it glorifies war simply by reproducing it for entertainment purposes I cannot agree with.

Distributed by OziSoft (02) 211 1266
RRP C64 C: \$29.95, D: \$39.95. ■

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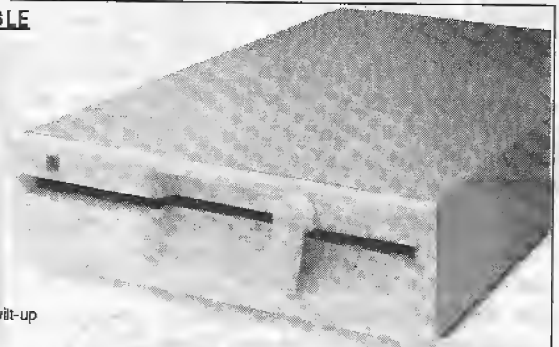
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Apollo 18

by Adam Rigby

There have been at least two generations who have wanted to be astronauts when they grow up, now for all those people who haven't quite grown up yet here is a game on the Commodore 64 and Amiga that allows the spaceman in your childhood dreams to rocket to life.

WITH SO many different types of simulations now available on computer, it is not surprising that a true to life space exploration simulation has come along on.

Now Accolade gives you the opportunity to share the thrill, tension and exhilaration that only a handful of brave explorers have experienced. *Apollo 18* is a simulation of an actual Apollo Moon flight, with realistic depictions of every stage of the mission.

So with joystick in hand and David Bowie's *Space Oddity* playing on the stereo we were well equipped to handle anything that this simulation was ready to dish out. The gold fish bowl was on stand by in case we were thrown out into space - being prepared never hurt anyone.

Some very nifty intro screens plus some crackly digitisations of astronauts preparing the Apollo for take off.

"Roger, affirmative."

"Apollo ready for ignition."

"First stage pressurise."

All this plus some very impressive silhouettes of various astral scenes set the standard for the game.

Apollo 18 is broken up into various sections of the mission much the way like the real expedition would have been carried out. There are seven sub-missions to be completed during the course of the game, these start with blast off and include landing on the moon, a space walk, a satellite capture and re-entering the earth's atmosphere. For each sub-

mission you must go through a telemetry screen in which you set all the necessary conditions to their respective val-

ues. Then you return to the current visual screen which represents the submission or stage that is relevant to you.

The whole style of gameplay of this game is successfully completing various timing tests, which involve pressing the joystick button at the precise moment that a timing meter hits its mid point. The measurement of your success is measured on how many 1000ths of seconds that your timing was out. As you can imagine the bar moves very fast and the whole procedure is not an easy task.

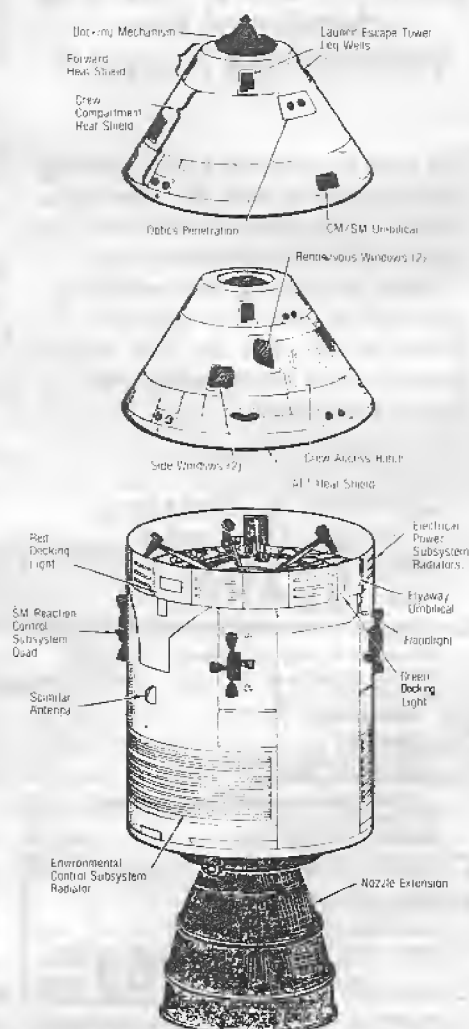
It took me at least five of six tries just to get the damn rocket in the air and moving, meanwhile I cost our simulated NASA a few billion dollars. Once you've got the hang of the timing it's all smooth sailing from then on, or should I say smooth rocketing. All the timing tests are basically the same throughout the game - the main entertainment comes from the animation and sound of the simulation rather than the playing side of it.

Apollo 18 is a very interesting exercise in computer gaming and would simulate the expedition of space travel quite well - the majority of it is done by the computer, you just sit back and watch the view.

For people who like to be a very integral part of a game *Apollo 18* would not be very interesting, however, if you are interested in how the guys with the "right stuff" did it the first time this could be of interest to you. The sound and graphics are of the highest quality.

Apollo 18 is distributed by Ozi Soft. The Amiga version is not available yet. C64 RRP C: \$29.95, D: \$39.95. ■

Apollo Command/Service Modules



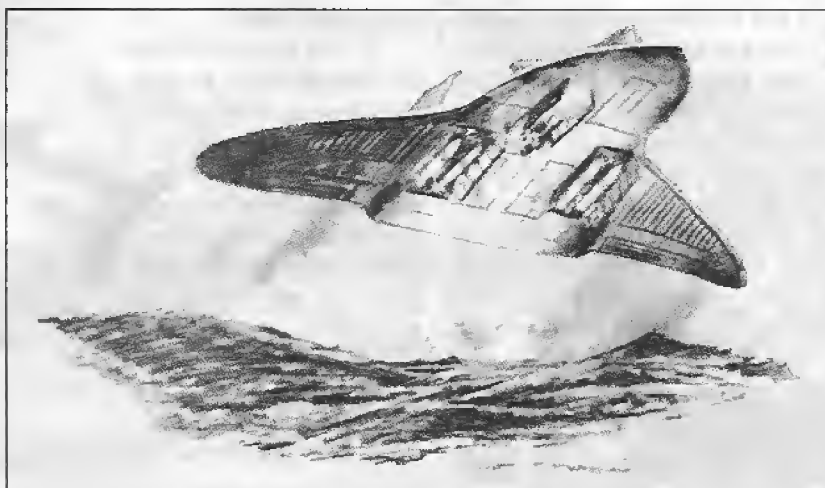
Project stealth fighter

RIGHT IN there with the best flight simulators comes a new game called *Project Stealth Fighter*. Its flight simulation is good enough so that it could be just that, however it is also a complete combat simulation with various missions and levels of difficulty.

Complete with Heads-Up display, your jet has the latest in technological innovations. Extensive target tracking systems as well as radar and stealth technology put you in a performance class of your own.

There are various different areas that can be involved in conflict that you may need to visit. You start in Libya and from there you can go to the Persian Gulf, the North Cape or perhaps even Central Europe.

Whilst this may seem like just another shoot-to-kill game, it is far more in-depth than the average. The manual itself is quite a comprehensive text that covers extensive information about the



armament and tactics recommended for use during encounters.

The most impressive feature about this game is its realism — not that I have actually flown a F-19 Stealth Fighter to compare it with. The game holds your attention and definitely does

make you feel you are there.

Distributed by Questor (02) 697 8666. RRP C64 C:\$39.95 D:\$49.95.■

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Basil the Great Mouse Detective

by Adam Rigby

AT last a theme that is free of alien-killing and tank zapping, an innocent game of hunting out clues and solving crimes. The fact that you play the entire game as a mouse also adds a certain innocent charm to the game.

Basil the Great Mouse Detective who lives in the basement of 221b Baker St (Sherlock Holmes' famous London address) is the greatest detective in all of Mousedom - a charming little town I'm sure. Basil is attempting to solve a case

into Ratigan's den.

To find your clues examine objects such as jam jars, tin cans, small sacks, cider jars, chests and carpet bags. Pressing the space bar allows Basil to investigate an object. The object under scrutiny will appear in your magnifying glass in the bottom right-hand corner of the screen.

As you look through your magnifying glass you will notice that to its left a red "DROP" symbol begins to flash.

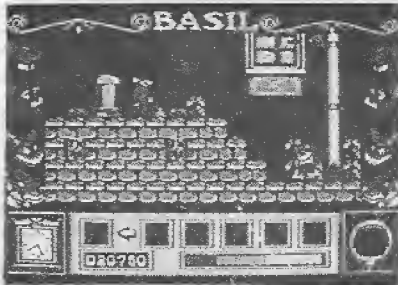


when you have filled all five pockets can you deduce which clues are false and discard them. Do this by holding down the question mark on the keyboard, and your magnifying glass will tell you the answer.

When you have collected the fifth correct clue you will be given a message

which asks you to go to an area where the exit to the next scenario can be found.

"As Basil, you are caught within the most sinister and fiendish criminal plan of Ratigan's career."



which has lead to the kidnapping of his chubby friend, Dr. Dawson, by the evil Professor Ratigan, criminal mastermind of London's rodent underworld. Perhaps this little fiend was responsible for The Great Bus Robbery.

This mysterious case leads Basil from London's seedy waterfront district through the backwaters of London's sewers and finally to the sinister clutches of the notorious Professor Ratigan.

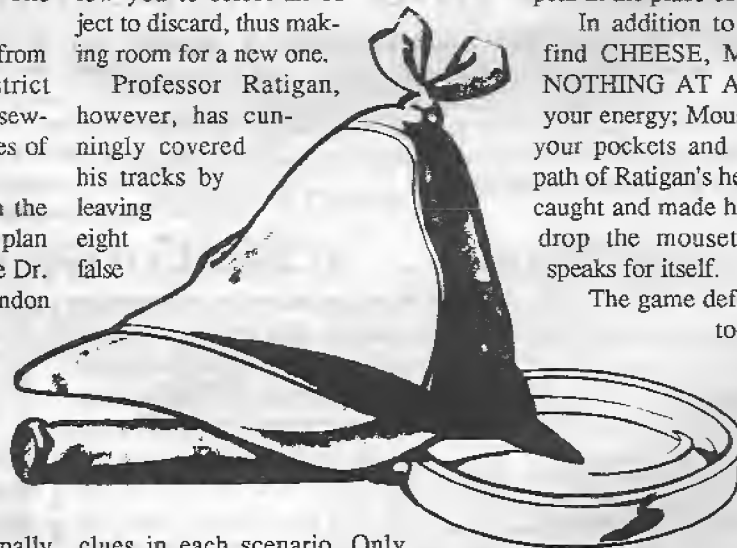
As Basil, you are caught within the most sinister and fiendish criminal plan of Ratigan's career. You must rescue Dr. Dawson from Ratigan's lawless London prison.

To rescue Dr. Dawson you must collect clues from each of three scenarios - the shops and docks of London, London's sewers and Ratigan's den. Five clues must be collected, which will lead you to the next scenario and finally

Pressing up or down on the joystick selects between "Pick Up" and "Drop". Press fire to choose your action to affect whatever is in each of your five pockets.

If all your pockets are full, selecting "Pick Up" will make a cursor appear, allow you to select an object to discard, thus making room for a new one.

Professor Ratigan, however, has cunningly covered his tracks by leaving eight false

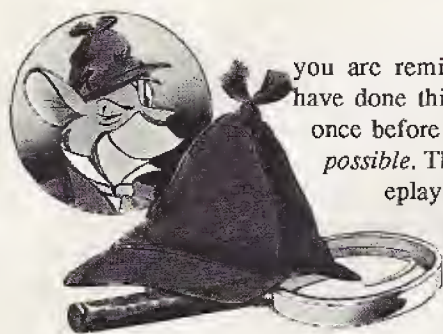


If by chance you should lose your way, you can use each of your five clues to give you a hint as to which direction you must go. This too is done by holding down the question mark on the keyboard. The best direction to go will appear in the place of the clue.

In addition to clues you will also find CHEESE, MOUSE TRAPS and NOTHING AT ALL. Cheese will top your energy; Mousetraps can be kept in your pockets and later dropped in the path of Ratigan's henchmen, who will be caught and made harmless. Press "T" to drop the mousetrap; nothing at all speaks for itself.

The game definitely has a cute feel to it, as Basil jumps around collecting clues and climbing through mail boxes. As you run from room to room looking for clues

clues in each scenario. Only



you are reminded that you have done this sort of thing once before - *Mission Impossible*. The overall gameplay is indeed similar to *Mission Impossible* but with less violence, which is a fea-

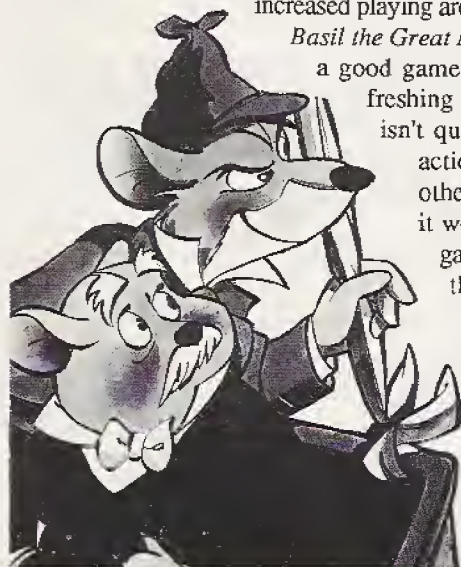
ture that is well received.

Music during gameplay is non-existent, only the occasional beep and murmur from the monitor. However, the music during the opening titles more than makes up for the lack during the game. In fact the lack of music whilst playing the game makes it easier to concentrate on the objectives.

There is a hint of Sherlock Holmes about Basil as he struts around the screen in his trench coat, searching the land of Mousedom for anything that will bring him closer to his colleague. Basil exists as an animated sprite, pretty limited life style, which is quite smooth as are the other characters that roam the world of Mousedom.

After playing the game for some time and getting absolutely nowhere I realised that you could jump up and into the letter shutters in the front doors that appear quite often through the scenery. After you crawl your way through this hole you have access to quite an increased playing area.

Basil the Great Mouse Detective is a good game with a rather refreshing plot. Obviously it isn't quite the same fast-action as some of the other latest titles but it would make a great game to introduce the kids to - perhaps a little complicated for the two year-old however.



Hints

- The shops have front and back doors.

“The lack of music whilst playing the game makes it easier to concentrate on the objectives.”

- The baddies will follow you if you are on the same level.
- Keep walking in the same direction to pick up speed for a long jump.
- Use the traps where you cannot jump over the baddies.
- Enter the Sea farer's Inn on level two.
- Find the secret room on level three.

Distributed by OziSoft (02) 211 1266. RRP C64 C: \$29.95, D: \$39.95. ■

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DIGITAL ART is a new concept in design, using the adjustment of curvature at different points to draw curves smoothly, in place of jagged, unsteady freehand drawing. More details can be found in the March issues of this magazine, or obtained directly from us. All enquiries have to be accompanied by a stamped envelope to get a personal reply.

Winners would be named in future issues of this magazine.

Staff of **KRYPTOLOGIC** and their relatives are not eligible to enter the competition.

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GEOS - a look at an alternative operating system for the C64

NOT LONG AGO a friend of mine bought a C-64 Pro-Pack. Bundled with the computer and disc-drive was a program called GEOS, together with a manual which he thought was of rather daunting thickness.

Now, Bob's new to computing and tends to shy away from anything that even hints at being technical, while your correspondent is rather the opposite - been around Commodore computing for a while and keen to delve into new things. A bit of complexity and technical elegance doesn't hurt, either! So when Bob asked me to check out GEOS for him and tell him what it does, I jumped at the chance.

Although I have owned a 64 or 128 for a while, and GEOS has been around for some time, I never took the time to investigate it. Let me tell you that having done so over the last week, I have to ask myself why I took so long.

This program is something special. It takes a small computer - what some of the jealous opposition refer to as a "games machine" - and transforms it into

by Frank Paterson

an elegant electronic working environment where text and graphics can be mixed and manipulated at will. Information from spreadsheets and filing systems can be called into your document. Files can be manipulated without ever typing a command - no more complicated syntax and the inevitable "SYNTAX ERROR". File copying and indeed whole disc copying is available without the need for separate utility programs. Hi-res pictures can be mixed with text files, and the text itself can be in a range of fonts and sizes but let's start at the start.

When you power-up your 64, you are not at operating system level. You are in BASIC, or more specifically, in CBM's BASIC 2. The way Commodore has set things up on the 64, BASIC is your window - your means of communication - with the computer.

You use BASIC to find out what's on your discs.

```
LOAD "S",8 <RETURN>
LIST <RETURN>)
```

Or to change a filename.

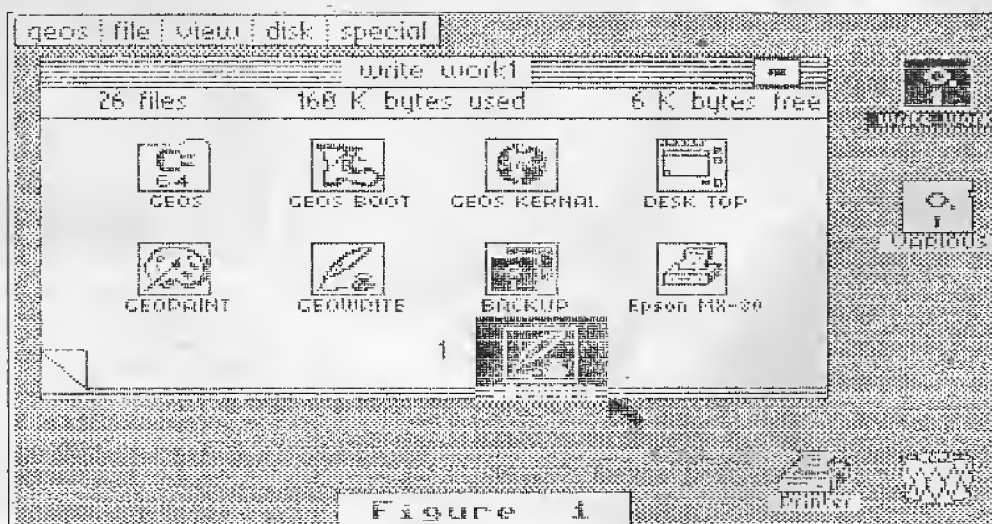
```
OPEN
15,8,15,"R0:newname=oldname":
CLOSE15 <RETURN>
```

Or to scratch a file.

```
OPEN
15,8,15,"S0:filename":CLOSE15
<RETURN>.
```

It is not a particularly powerful BASIC and as the examples show, not particularly convenient; it certainly doesn't match the capabilities of the 64 with its powerful graphics and sound facilities. In day-to-day computing, perhaps the most serious deficiency is the lack of simple disc commands. Add to that the elephantine slowness of the 1541 disc drive and you have a system in need of upgrading. All of this spawned a profusion of BASIC enhance-

GEOS Desktop. Note the pull-down menus at top-left. The two disc icons in the right hand border indicate that two drives have been recognised by GEOS. The highlighted drive icon indicates the active drive, in this case the top one, Drive A. Note also the ghost of the GEO-WRITE icon being dragged by the pointer. It could be headed for the waste-paper bin, in which case it will be scratched, or for the non-active drive (B), in which case it will be copied to the disc named "VARIOUS".



ments and accelerators for the 64/1541 combination: Commodore's own DOS Wedge, cartridges such as Epyx FastLoad, replacement ROMs such as Cockroach Turbo-Rom, language extensions such as Simon's Basic, and any number of utilities published in magazines, etc.

Without exception, these are good, but they all share a common property: you must know a syntax and you must type a command line or write a program to make the computer do anything. Now some people, in fact a large number, cannot do that - they may not be the slightest bit interested. All they want is a result in the simplest and most non-technical way possible. This is where GEOS is a world apart from the above enhancements.

GEOS stands for Graphic Environment Operating System and it's totally different from the operating system contained in ROM in your 64.

GEOS emulates on the 64 what Apple does on the Macintosh, what IBM PCs and compatibles do with GEM and what Commodore has done with the Amiga. Except they use 16 bit technology, hard discs and megabytes of RAM, with hardware costs of up to \$5000 - more if you want bells and whistles. Berkley Softworks has managed to do it with an 8 bit processor, a slow serial floppy disc drive and a mere 64k RAM, for a system cost of about \$600. Astounding!

What a graphic environment achieves is to do away almost entirely with the need to type commands to the computer. Instead, the user is presented with graphic representations of certain tasks or with lists of choices (menus) which may be pulled down from the top of the screen. You select your choice by moving a pointer to it with a joystick or mouse, click the fire or mouse button, and behold, your chosen instruction is executed.

Let's get GEOS started and deal with specific examples.

After you have loaded GEOS, things

GEOS News

Abacus software have brought out a product to make life with GEOS even more interesting. Becker BASIC allows you to write your own GEOS applications in BASIC, something that has been missing for quite some time.

Everything is here, use Pull-down Menu Construction to make your programs look more professional and become easier to use. Also over 20 new editing commands have been added to make programming a breeze. Included are such commands as Trace, Renumber, Dump, Dir and Pold, also structuring commands such as If/Then/Else, Repeat, While, Loop can be inserted to make programming a much faster and logical process.

Disk commands are also increased with over 50 commands added to make disk access not only faster but totally compatible with GEOS. Sequential, user and relative files can be accessed with ease under these new commands.

Over 70 additional commands have been added to make sound and graphics simple and delightful to use. Watch the GEOS column next month for a complete review on this very powerful product.

are different. The first module that is loaded is a disc accelerator, so that all those aforementioned accessories like FastLoad and Turbo Rom are not necessary, and in fact may interfere with proper operation of GEOS. The GEOS system speeds up BOTH read and write operations on the disc by a factor of about 5, so system load time is an acceptable 31 seconds.

GEOS supports one or two drives. One is great. Two is a dream. It may even support more, but I'm not sure about that. In any case, when it boots

up, GEOS checks to see how many drives are available and sets itself accordingly.

When everything has settled down and the load is finished, you will be presented with a hi-res monochrome screen representation of your work environment, called "Desktop" (See figure 1). It looks like pages of a large, multi-sheet desk-top blotter, with the top page dog-eared at the bottom left corner. Somewhere on the screen will be an arrow, which can be moved about with a joystick or mouse in joystick port 1.

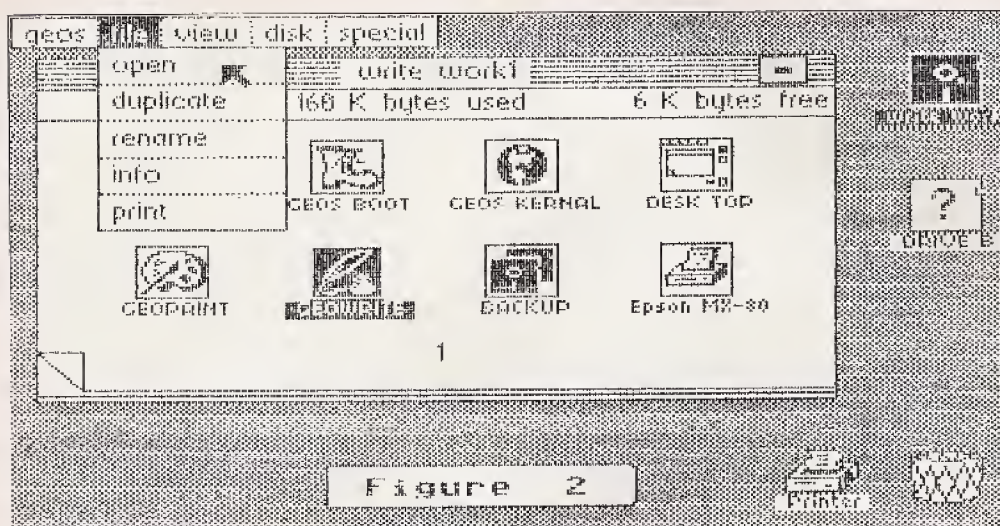
In the top margin of the screen are five Desktop pull-down menu titles. ("Pull-down" because when you point to them with the arrow and click the fire or mouse button, a menu of further choices drops down.)

Coming down the screen, the next area is a striped bar which contains the name of the currently active disk (important if you have two drives). Within the bar, to the right, is a square with a black centre; more on that later.

The next section tells you the number of files on the disc, the number of bytes used and the number free. This is a really handy feature because GEOS keeps it updated continuously. You always know just how much disc space is available without having to ask for a directory. The directory itself is always available on Desktop, in the next and largest section of the blotter.

Each file on the disc is represented by a small picture - an ICON - with the filename beneath. The icon tells you at a glance what the purpose of the file is. For example, a GEOS application such as *Geopaint* is represented by an artist's palette, with the filename beneath. *Geowrite*, the word processor, is represented by a feather and inkwell. Files produced by these applications have their own distinctive icons - framed pictures for *Geopaint* files and stacked pages for *Geowrite* files, each of course, with its filename beneath.

Each sheet of the Desktop blotter holds eight icons and since DOS can



Opening a file.
The file to be opened is "GEOWRITE" on Drive A containing the disc named "write work". An alternative way to open this file would be to point to the GEOWRITE file icon and click twice, rapidly. To open BACKUP, the BACKUP file icon would be highlighted by clicking once, followed by "open" on the "file" menu. Note that Drive B is still present, but the ? mark indicates no disc in the drive.

store a maximum of 144 files, there may be eighteen blotter sheets. You move forward through the sheets by pointing at the dog-ear at the bottom left of the screen and clicking and backward by pointing and clicking at the "neat" corner. This is the GEOS way of browsing through a directory and locating files.

In the margin at the top-right of the screen, to the right of the blotter, is an icon representing each accessible disc drive, with the disc name beneath. The icon for the active drive is highlighted, so you always know which drive will respond to a command. When files are transferred, they are always copied from the active drive to the non-active drive, so it's handy to have this direct pictorial indication of which way the data is going to flow.

To the bottom-right of the screen are icons representing a printer and a waste-paper basket.

Now, before we get involved in experimenting and creating, we should follow the manual's worthy advice and make a back-

up of the master disc and also create a work disc. In doing this, we'll get our first taste of how programs are run and how files are manipulated under GEOS. We need to create a work disc for two reasons.

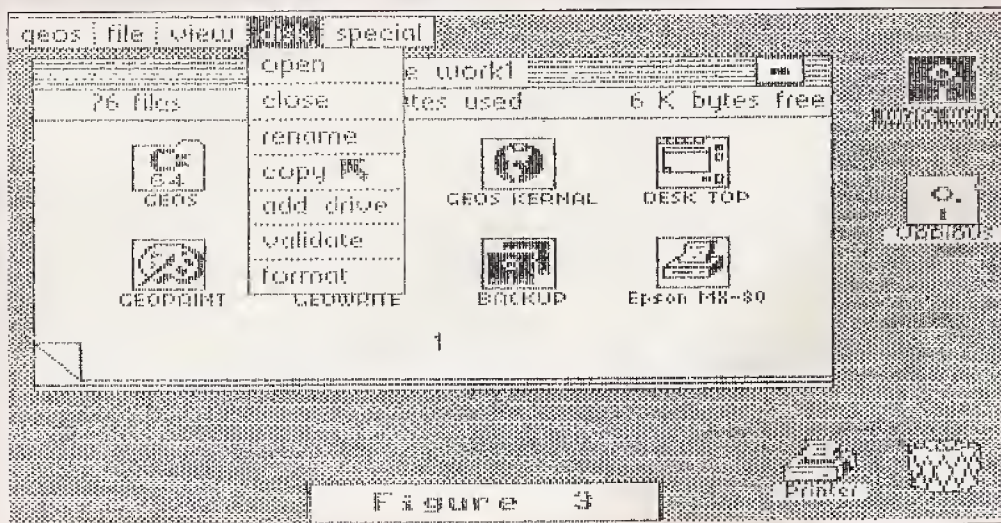
Firstly, the master disc is full and there is no room for data. Because the program does big things with a small computer, there is insufficient RAM available to hold both the program and a decent-sized document or hi-res picture as well.

To get around this limitation, GEOS applications store part of your work in memory and part in temporary disc files, which are made permanent when you decide to save your work. The technique of

using temporary disc files as accessible data storage during program execution is known as virtual memory. GEOS needs about 8k of disc space for this virtual memory, and as there is no free space on the master disc, you can't even fool around to check it out.

The second reason is one of principle ... you should NEVER write data to a master program disc lest the gremlins strike and scramble your BAM and your data and your program so you miss your deadline and the Editor doesn't believe you and the wife complains because the kids can hear you swearing ... well, you get the drift!

If your copy of GEOS was bundled with a C-64, Commodore will have pro-



Two-drive disk copy.

The active disc is "write work" in Drive A. Its contents will be transferred to "VARIOUS" in Drive B and will overwrite anything present on "VARIOUS".

vided you with a work disc, but we'll go ahead and create one just for the exercise.

The authors have provided a BACKUP program which appears on page 1 of the desktop. To run it, point to the BACKUP icon and click. The icon will be highlighted, indicating that this file is the active file. Now point to the pull-down menu labelled "file" at the top of the screen and click. A menu will appear below the word "file" (see figure 2). The pointer will be positioned on the word OPEN, which is what we want to do ... we want to open the active file. Click again and the BACKUP program will load and run.

Another easier way to open a file is to point to the file's icon and click twice in rapid succession.

I won't go through the full sequence of instructions for duplicating a disc with the BACKUP program - just follow the prompts as they appear on the screen, swap the discs at the right time, and at the end of it all you will have a backup copy of the GEOS master disc.

I suppose Berkeley Software is as interested as any other software publisher in not having their programs pirated. To this end, the backup you've just created will not boot GEOS - you will have to re-boot using the original GEOS master disc. To do this now, insert the master

disc in drive eight and press the RE-STORE key by itself. GEOS will re-boot and you will find yourself again at the desktop.

We should repeat the backup process to make a work disc, but I would like to show you another way which is more convenient if you are lucky enough to own two drives.

The second drive will have to be set as device 9, and it's best to hardwire it that way either by cutting the jumpers on the circuit board or by installing a switch. The modification is easily done and I think has been the subject of an article in a previous issue. GEOS can also handle a device number change through software by using the ADD DRIVE option in the "disk" pulldown menu. If you choose to set your second drive device number this way, you will have to redo it every time you re-boot GEOS because at that time the drives are reset, thus losing their "soft-set" device numbers. Hardwired device numbers remain fixed.

With the original master disc in the active drive (represented by the highlighted disc icon in the right margin), point to the pulldown menu labelled "disk" and click. Stay within the boundaries of the menu and point to FORMAT. Click again and follow the prompts as they appear in GEOS's "dialogue boxes" (figure

4). Dialogue boxes are small windows which appear on top of whatever you're doing on the screen whenever GEOS needs to communicate with you. They disappear and leave your work unaffected when they are no longer needed. In this case, GEOS will tell you to insert a destination disk in one of the drives, and give it a name.

Once this is done, the disc will be specially formatted and will be ready to receive GEOS data. You can also use discs formatted normally, i.e. outside GEOS, but these must be converted to GEOS format before they can be used.

When GEOS detects one of these discs in a drive, it asks if you want it converted to GEOS format. To make GEOS detect the disc, place it in the non-active drive then point to the icon for that drive. Make the appropriate response in the dialogue box and the conversion is done in a second or two... much faster than a full format which takes about ninety seconds. Re-insert the master disc if necessary, re-activate the drive containing the master disc by pointing to its icon and clicking, then point and click the "disk" pulldown menu (figure 3).

Point to COPY and click. GEOS will ask for confirmation of your intentions, as the copy process will overwrite

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Graphics Utility	including postage

any data already present on the destination disc. Once you have responded correctly, GEOS will copy the contents of the master disc, file-by-file, to the destination disc and again, at the end of it all you will have a backup of the master disc WITH A DIFFERENCE. This one WILL boot GEOS, so you can safely store your original as insurance against gremlins and use this one as a master, which is what backing up is really all about.

If you have followed me to this point, you will have two copies of the master disc. If you have two drives, one of the copies will be bootable: put this one aside as your master disc for regular use and file the original in a safe place. The other copy will be your work disc, but first you will have to delete some files to create space. You don't need system files on a work disc, so the first to be scratched should be the files called "GEOS", "GEOS BOOT" and "GEOS KERNAL". The way to scratch files under GEOS is really very intuitive - click a file icon twice, slowly, drag it to the garbage bin, click again and the file will be removed from the desktop. However, the three files we want to remove are write protected and cannot be scratched just yet.

I should explain here that when you scratch a file from a disc, the file is not physically removed. What happens in-

stead is that certain information is written onto the disc which tells the system that the file is no longer needed, and can be over-written with new data. On receipt of that information, the Disc Operating System no longer displays the file in the directory, so it appears to have been erased. When a file is "write-protected", that certain information cannot be written to the disc and so the file will not be scratched and its directory entry will remain.

To "unprotect" a write-protected file, activate it by clicking its icon once then click the "file" menu. Click the INFO option and a dialogue box will appear, informing you of various parameters such as file-type, size, etc. At the bottom of the box is a small square labelled WRITE PROTECT. If the square is solid, then the file is protected; to "unprotect" it, point to the square and click, whereupon it will become hollow or outlined. To close the dialogue box and complete the operation, click the "close button", ie the small square to the right of the striped section at the top of the dialogue box. While we're talking about close buttons, note that there is also one in a similar position in the Desktop's striped header. If you click that, you will close Desktop. There will be no file icons displayed and all drives will become non-active. I haven't yet figured out why you would want to do this!

Repeat the unprotect operation for each of the files you want to scratch, then go ahead and scratch them by dragging their icons into the garbage can and clicking. BE WARNED that once a file is scratched, it's gone forever. In the manual's own words, the garbage bin is more like an incinerator - once something has been put into it, it's destroyed.

We set out to learn how GEOS allows you to manipulate files without having to learn complicated syntaxes or write programs of your own or use external utility programs. We've done that, and in so doing have created both a backup master disc and a work disc. We have formatted a disc, jumped out of and back into GEOS by running BACKUP, made two backups of the master disc, copied files, erased files and done some fancy directory manipulation without typing a single command and almost without leaving the host environment (Desktop). It's all been "point and click", and that's what GEOS is all about.

Next month, I hope to have a look at GEOS for the 128, but if that doesn't eventuate, we'll look at some of the capabilities of the word processor, GEOWRITE and the graphics package, GEOPAINT. In the process, we'll talk about printers, input devices and the Preference Manager. Maybe the Clock, the Notepad and the Calculator will get a mention too. Until then, re-discover your 64!

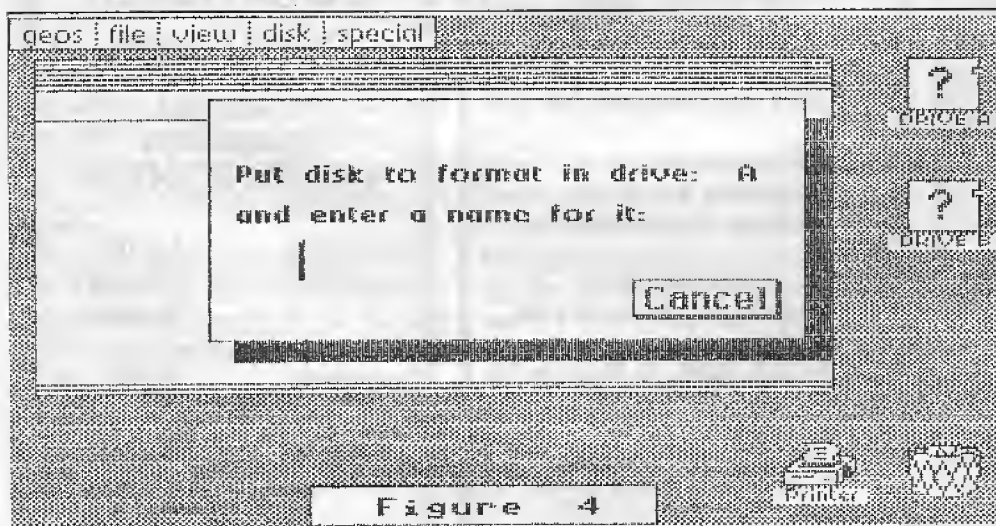
Dialogue Window.

Enter text at the special cursor (the vertical line) and press RETURN on completion. You can escape by clicking the CANCEL box.

This window came from the FORMAT option in the DISK menu.

LATE NEWS

A 1526 printer driver is now available for GEOS. It also works with the MPS 802. To obtain this, send a disk to Commodore's Software Production Dept with a letter requesting the latest GEOS printer disk. This is provided free of charge.



Experimenting with Commodore's printer driver on the 128 under CPM

by Frank Paterson

WHEN ALL IS said and done, I suppose I am basically a lazy person - at least at heart. My wife would argue the point. She says that I spend so much time and effort on trying to make things easier for myself that laziness doesn't come into it. It's more like a perverted sense of dedication, she says, and is most noticeable when I insist on trying to make my computer do something it doesn't really want to do or conversely, not do something which it thinks is necessary for the health of its ROMs.

Consequently, the grass is too long, the car doesn't run well and the house needs painting, all because my computer and I differ in our ideas. In this case, it insists on translating real ASCII to Commodore ASCII, and I don't want it to!

The problem has its roots in the days of the trusty old 64 and all those neat graphics-oriented programs which have a PRINT option. Some publishers assumed that a 64 owner would only own a CBM printer. Most others assumed (correctly) that an Epson compatible, or some other, was more flexible, and provided all sorts of options in their Printer Set-Up menus so that a non-Commodore printer could make sense of the Commodore output from the computer. Add to that the options available on some of the good printer interfaces, like the Xetec Super Graphix, and also on the printers themselves, and things can become complicated. Like ASCII being translated twice; line-feeds being added, stripped and added again; paper being fed continuously through the printer, etc.

My approach was to rationalise the printer and interface settings so that they do not have to be changed from program to program. Thus the DIP switches on the interface remain set for a Gemini 10X. ASCII translation is left on

"Transparent", allowing output from the computer to go unchanged to the printer, and auto line-feeds are not selected. This means that the printer, being an ASCII printer, is expecting real ASCII (not Commodore ASCII) and that it won't add

"My computer insists on translating real ASCII to Commodore ASCII and I don't want it to!"

line-feeds to carriage returns. In turn, the program must be set to provide real ASCII output and to add the linefeeds to carriage returns when necessary.

I found this set-up to be compatible with the majority of software, as most programs have comprehensive printer set-up menus which allow the right choices.

When I started using CPM on the 128, everything was fine, except that I had to set the interface for CBM 1525 printer emulation. As would be expected in a Commodore implementation of CPM in a Commodore machine, the system had been designed to output Commodore ASCII to a Commodore printer.

No big problem there, apart from it not fitting in with my basic way of doing things ... until I wanted to use *Wordstar* and underlined characters. The 1525 can't underline, can it?! Also, extra line-feeds were occurring, regardless of the position of the line-feed switch on the printer.

"Use a different wordprocessor", I hear you say. Not possible, I'm afraid. The work manual I wrote two years ago was done on *Wordstar* and required extensive revision and I wasn't about to spend weeks converting a 100 page document to suit another program when I already had the correct gear on my desk. As far as I was concerned, all that was needed was a bit of fine tuning.

So much for optimism. The best re-

sult I could get by flicking DIP switches was underlining with reversed upper and lower case characters! Not very professional. The problem was that unlike the previously mentioned C-64/128 programs, neither *Wordstar* nor CPM gave an option to convert ASCII within the program, so that the system would ONLY deliver Commodore ASCII to the printer. An ASCII underline character (chr\$(95)) became a left-arrow because in Commodore ASCII, that's what chr\$(95) represents. All my underlined paragraph headings had left arrows through them, or alternatively, were underlined but with reversed upper and lower cases.

After much thought and some guidance from Gary Mason in Commodore's Technical Support department in Sydney, I figured the only real way to solve the problem was to stop the translation (within CPM) from real ASCII to Commodore ASCII. This was not a simple task, as it meant altering the printer driver and re-creating the system files which are, in fact, the CPM operating system.

Before I could do that I had to wait for delivery of the *CPM Development Package* from Commodore. (A thick book of about 700 pages and two discs of CPM source files and utilities originating from Digital Research and marketed by Commodore - cost \$50.00 and well worth every cent.)

Before I go too much further with this, I'll warn you that I am a beginner as far as machine code is concerned, and most of what I've learned is a direct result of this project. If I miss something or get it wrong, don't be too unkind - in fact, I would be most grateful if you would take the time to write and set me straight. I know there are other 128 owners out there who are looking for answers to similar problems and I'm sure they would appreciate your input. My address follows the article.

Listing 1

Listing 1 is the unmodified assembly listing of Commodore's printer driver called "CXPRINTER.asm". I will refer to parts of the program by the line numbers in the leftmost column as I step through the changes I propose and the reasons behind them.

The character to be printed has been placed in the C register of the Z-80 by an earlier routine.

Lines 0000 to 000A are preparatory instructions:- lines 0003 and 0005 indicate that the printer device number must be 4; lines 0008 and 000A set up the secondary address, which is important for Commodore printers, as different functions can be activated by changing secondary addresses. This routine fixes the secondary address at the default value of 7.

Line 000D moves the character to be printed from the C register to the Accumulator.

Line 000E performs a logical AND on the contents of the Accumulator and 7F hex (127 decimal). This ensures that only REAL ASCII characters are passed on. (Real ASCII characters are CHR\$(0) to CHR\$(127) only. Commodore ASCII goes up to CHR\$(255)).

Line 0010 is critical as it is here that the conversion routine is called.

My first plan of attack was to deactivate the call to CONVERT in line 0010 by replacing the three bytes CD 1B 00 with NOPs ... 00 00 00. That fixed the reversed upper and lower case and underline problems, but did nothing about the extraneous line-feeds. It appeared that CONVERT would have to be called after all, and the problem attacked in there. Back to the drawing-board

The first part of the CONVERT subroutine tests for a carriage return in line 001B. If the character to be printed IS a carriage return, then a jump is made to IS CARRIAGE RETURN (IS\$CR) at line 0034, where 80 hex is added to the carriage return (anyone know why?) and a return from subroutine is made, back to 0013 and finally off into another part of the system to be printed. (Line 0018.)

If the character is NOT a carriage return, then the program drops through

into another sub-routine called, surprisingly enough, NOT CARRIAGE RETURN (NOT\$CR in line 001F). Here it starts testing for upper and lower case characters. (The '@' is just before the start of upper case letters in real ASCII and just before the start of lower case in Commodore ASCII.) We don't want the case conversion to take place, because that is what is causing reversed cases on the printer.

This seems promising. Perhaps we can kill two birds with one stone by checking first for a line-feed and if we find it, replace it with a NULL (00 hex). After that, we'll force a return from subroutine back to line 0013, so that no further conversion is possible. All this should be done without changing the length of the CXPRINTER.ASM module so that everything else stays in its original location when a new CPM+ system file is generated.

Listing 2

Listing 2 is the modified CXPRINTER.ASM file. The first modification is to NOT\$CR, in line 001F, where CPI 0AH means "compare the accumulator with 0A hex." (A line-feed is chr\$ 10 dec or 0A hex). If the contents of the accumulator equal 0A, the Z flag of the Z-80 will be set. The next instruction, JRZ UPPER\$SYMBOLS means "if the Z flag is set, then jump to UPPER\$SYMBOLS". Because we do not wish to do any ASCII conversion this routine is redundant, so we can change it to strip the line-feeds.

UPPER\$SYMBOLS is on line 0037 and the new instruction will be MVI A,00H, which replaces the line-feed contained in the accumulator with a NULL. The next instruction, RET, forces a return from subroutine to 0013 and back into the system to print the character.

Now we have to go back to NOT\$CR and deal with characters that are not line-feeds. At line 001f in listing 2, we tested for a line-feed and if there was one, the program jumped to UPPER\$SYMBOLS. If there is not a line-feed present, the program will fall through to line 0023 because the Z flag-

is not set, so the conditional jump set up by JRZ will not occur. Now, we've dealt with the line-feed problem (hopefully) and we don't want the program to go on with ASCII conversion, so what we need at this point is a RET (RETurn from subroutine). However, that would use fewer bytes than the original program, causing things to move around in memory and possibly causing more problems. To avoid that, we'll force a RET in a roundabout way and in doing so, will not alter the length of the program.

Remember back in line 000E, we ensured that only real ASCII characters i.e 0 to 7F hex (0 to 127 dec), would get past that point. Meaning that where we are in the program, line 0023, no matter what character is in the accumulator, it has to be less than 80 hex (128 dec). If we can compare the accumulator with 80 hex and organise a return from subroutine if the accumulator is less than 80, then we have effectively forced a RET, as desired.

Happily, instructions exist which can do this in our required number of bytes, and they appear in line 0023. CPI 80H means "compare the accumulator with 80 hex". If the accumulator is less than 80H, the C flag of the Z-80 will be set; we know that this will occur because only characters less than 80 hex have been allowed to get this far. The next instruction, RC, means "RETURN if the C flag is set", so there we have it - a RET in three bytes instead of one.

The acid test of course, is to create a new CPM+.sys file using this modified module, and run it. I am pleased to be able to report that it works as planned with only one minor hitch ... I did such a fine job stripping line-feeds that to get them back, auto line-feeds on the printer have to be selected on. This is a compromise, to a degree, of what I set out to do but at this stage I am happy just to have the system working. I think the hitch may be caused by the IS\$CR routine, where 80 hex is added to a carriage return before it is sent to the printer, but I'll keep that til next month when I will also discuss problems I've encountered in

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using the NLQ mode on the Super Graphix with CPM on my 128. Happy hacking!

Author correspondence to:- Frank Paterson, 137 Wyangala Cres, LEUMEAH, NSW 2560

Listing 1

This is the unmodified assembly listing of Commodore's CPM printer driver for the C-128. It was produced by running the source file "cxprnte.asm" on MAC.COM, both of which are on the discs provided in Commodore's CPM Development Package.

```
CP/MMACROASSEM 2.0  £001      CXPRINTER.asm      Commodore printer drivers
2 May 85
12 May 85'          TITLE      'CXPRINTER.asm      Commodore printer drivers

MACLIB Z80

MACLIB CXEQU
N      PUBLIC ?PT$I$1101,?PT$O$1,?PT$O$2
      PUBLIC ?PT$S$1101

N      EXTRN ?FUN65

N      DSEG
      ;
      ;
      ;
      ;
N      DSEG
      ?PT$O$2:
0000 3E05      MVI      A,5
0002 21      DB      21H      ; SKIP NEXT TWO BYTES, ONE OP
CODE (DESTROYS HL)
      ; LXI  H,(MVI A,4)
      ?PT$O$1:
0003 3E04      MVI      A,4
0005 3202FD      STA      VIC$DRV      ; PASS DEVICE # IN VIC$DRV
0008 3E07      MVI      A,7
000A 3203FD      STA      VIC$TRK      ; PASS SECONDARY ADR IN VIC$TRK
000D 79      MOV      A,C
000E E67F      ANI      7FH      ; ONLY ALLOW REAL ASCII VALUES
      FOR NOW
0010 CD1B00      CALL     CONVERT
0013 3206FD      STA      VIC$DATA
0016 3E07      MVI      A,VIC$PRT
U0018 C30000      JMP      ?FUN65
      ;
      ;
      ;
      ;
      CONVERT:
001B FE0D      CPI      CR
```

```

001D+2815      JRZ      ISSCR
                DB      28H,ISSCR-$-1
                NOT$CR:
001F FE40      CPI      '@'
0021 D8        RC
0022 FE60      CPI      60H
                JRC      MAKE$UPPER$CASE
0024+380A      DB      38H,MAKE$UPPER$CASE-$-1

```

; IF IT IS A LOWER CASE LETTER SUBTRACT 20H

```

0026 FE7B      CPI      'Z'+1
                JRNC     LOWER$SYMBOLS
0028+3003      DB      30H,LOWER$SYMBOLS-$-1

```

```

002A D620      SUI      20H
002C C9        RET

```

;
;

LOWER\$SYMBOLS:

```

002D C660      ADI      60H
002F C9        RET

```

;
;

MAKE\$UPPER\$CASE:

```

0030 FE5B      CPI      'Z'+1
                JRNC     UPPER$SYMBOLS
0032+3003      DB      30H,UPPER$SYMBOLS-$-1

```

ISSCR:

```

0034 C680      ADI      80H
0036 C9        RET

```

;
;

UPPER\$SYMBOLS:

```

0037 FE5C      CPI      'N'
0039 C0        RNZ

```

```

003A 3EFF      MVI      A,0FFH

```

;
;

DPS-1101 PRINTER INITIALIZATION CODE

?PT\$I\$1101:

```

003C C9        RET

```

;
;

DPS-1101 PRINTER STATUS CODE

N

DSEG

?PT\$S\$1101:

;
;

RET

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```

NOT$CR:
001F FE0A      CPI      0AH      ;TEST FOR LFEED
               JRZ      UPPER$SYMBOLS ;UPPER$SYMBOLS CONVERTED TO
                                   STRIP LFEEDS
0021+2814      DB      28H,UPPER$SYMBOLS-$-1
0023 FE80      CPI      80H      ;BYPASSES ALL FOLLOWING ROUTINES AND
0025 D8        RC          ;IS EFFECTIVELY A RET
               ; IF IT IS A LOWER CASE LETTER SUBTRACT 20H
0026 FE7B      CPI      'z'+1
               JRNC     LOWER$SYMBOLS
0028+3003      DB      30H,LOWER$SYMBOLS-$-1
002A D620      SUI      20H
002C C9        RET

;
;
; LOWER$SYMBOLS:
002D C660      ADI      60H
002F C9        RET

;
;
; MAKESUPPER$CASE:
0030 FE5B      CPI      'Z'+1
               JRNC     UPPER$SYMBOLS
0032+3003      DB      30H,UPPER$SYMBOLS-$-1
               ISS$CR:
0034 C680      ADI      80H
0036 C9        RET

;
;
; UPPER$SYMBOLS:
0037 3E00      MVI      A,00H      ;ROUTINE CONVERTED TO STRIP L/
                                   FEEDS
0039 C9        RET                ;AND EXIT FROM 'CONVERT'

;      MVI      A,0FFH

;
;
;      DPS-1101 PRINTER INITIALIZATION CODE
;
; ?PT$I$1101:
003A C9        RET

;
;
;      DPS-1101 PRINTER STATUS CODE
;
;
;      DSEG
N      ;?PT$S$1101:
;      RET

```

Superbase 4

by Peter H. Gallen

Reorganising databases/files

This month we'll examine ways to reorganise your files when, as happens, you need to redesign your screen layouts, change the order of your fields or add new fields.

The simplest case involves adding a new field at the end of your record format. Strictly speaking this is not reorganising but expanding. Enter format mode and, at the end of the last field, add the new field(s) and exit via F1/run-stop.

The fun starts when the new data field needs to be anywhere other than at the end of the file or if the order of the fields is to be changed, usually to clarify presentation, or the file is to be split in two or divided over two disks.

This last case is the easiest to deal with although it involves several steps. It would be a good idea to make a list of the steps in order and then tick them off as you complete them. The approach needed is covered in *Superbase: The Book* on page 146, except that it assumes you are using a dual disk drive or one disk for both files. As the first case is rare I'll use the second as a basis for this example.

Step 1: Set up the target disk (B) ready to receive files ie. formatted and appropriately labelled, then set it aside.

Step 2: On the original disk (A) select the required database and file. Select 'maintain' from menu 2 and then select 'export'. Answer the prompt with a short, meaningful name eg. 'expfile.' This will help you remember which file is which. This name should NOT be either the original filename or the desti-

nation filename. Superbase now proceeds with the task of exporting the data into a sequential file on disk A. When this is complete you will be returned to menu 1.

Step 3: Using a file copy program, transfer both the 'expfile' and the file definition to disk B. Also copy any other files you may need such as the start program. If you use the Superbase Utility program be sure that none of your files is more than 112 blocks long. DO NOT copy the database definition file, as all the data will be output to the sequential file in an unuseable form.

Step 4: Re-enter Superbase and using disk B create the new database when prompted. Select the 'file' option and when asked, type in the name of the file definition you have copied across. When Superbase responds 'File does not exist: create it' answer 'y'. Superbase will then find the new file and insert it into the database so that it will appear as an empty file when next you enter 'file' mode from menu 1.

Step 5: Select the empty file then select 'import' option from the 'maintain' submenu. Reply to the prompt with the name 'expfile' and the data will be read from the export sequential file into Superbase.

Step 6: When completed, you will be returned to menu 1. Check that the number of entries is as expected and that there are no strange records by selecting the first and then last records and checking their contents. Often one or two stray records exist. These can easily be eliminated by deleting them.

You should now have your data transferred to a new file either on the original disk or on a new disk. However all computers are subject to untimely crashes, especially when performing delicate operations such as above. This applies as much to Superbase as it does to PC's running dBASE. So before you attempt any reorganisation of files, create a backup disk and work on it. If the system crashes at least you won't have lost your data...or you can refer to part two to recover what you can!

So far we've covered transfer of whole or part (using a list) of your data using the same file definition. Now we'll consider the 'output' option in order to rearrange the fields in the file. This can be done either manually or under program control.

First the manual approach:

Step 1: Set up the desired new file format, preferably on the original disk.

Fig 1 - Programmed output for rearranging files

```
10 rem program to output records
20 file"filename"
30 b$=" ":b=0:rem set string and numeric variables for new
   fields
40 find "hlist" where <search criteria>
50 output from "hlist" to "outfile"[field1][field3]plus
60 [field2]b#[field4]b[field6]
70 rem lines 50-60 illustrate that fields can be output in
   any order you want
80 eof menu:rem eof if not using find'
```


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MPS802 Publisher \$19.95 _____

Best DOS Utilities \$19.95 _____

Slide Show One \$8.95 _____

Total _____

```

10 rem program to transfer data from file.1 to file.2
20 file "file.1"
30 select f:rem a key field could be used
40 a$=[key]:d=[date]:c$=[name]
50 file "file.2"
60 clear:[code]=a$:[date]=d:[name]=c$:store
70 file "file.1":select n:eof menu
80 goto 40

```

Fig 2 - File to file transfer

This is much easier and when finished you can delete the original file and it's contents, leaving you with the new file only. For this operation use the 'delete' program provided on the Superbase disk.

Step 2: Select the original file and then the 'output' option. Type in the following:

all to "outfile" [field1][field2] etc.

If you only want to rearrange some of your records then select them first and use:

all from "hlist" to "outfile"[field1][field2]etc.

The fields can be in any order you desire, but must correspond exactly in number and type to those in the new format. If there are to be new fields in the destination file you must allow for them by inserting string or numeric variables at the appropriate points in the 'output line'. These variables should be set to a single space for text fields or to zero for numeric fields, eg.

a\$=" ":a=0 <return>:this enters the variables into memory

then, output all to "outfile"[field1]a\$[field3]a[field2]etc.

Step 3: Once your output file has been created,select the new file or create it if you haven't already. Make sure it

matches exactly the output file format.

Step 4: Select the 'import' option as described previously and proceed as before. If any errors occur, check by using the 'select first/select last' method. The most common errors result from mixing up numeric and text variables or trying to import a space into a key field (invalid FMS parameter). Correct any errors and delete any spurious records before retrying to import.

Dr Hunt suggests you use 'output all fill', but I've found that this creates unnecessary work, as you need to create an extra dummy field to capture the extra return character that the 'fill' statement adds to each record. Afterwards you will need to use 'format' mode to remove the dummy field from the end of the record format.

An example program [REFER FIG.1] illustrates how to do the above in program mode. This example also uses 'plus' to extend the number of output fields.

I must stress the need to leave room on your disks to manipulate the files, apart from space to store indexes and programs. About 150-200 blocks should be enough. I once was asked by a friend to

split up a database over two disks. What should have been a straightforward task took considerably longer to accomplish as the original disk only had about 50 blocks free.

I had to create small export files, transfer them, delete, and repeat these

steps many times.

To emphasise the versatility of Superbase, next is an example of how to transfer data from one file into another. [REFER FIG. 2] Here the required data is read from the first file by record, the field contents are assigned to variables, the swap is made to the new file, the variables are assigned to the fields of a blank record format and stored (the critical step).

Then the program returns to the first file to process the next record.

This procedure can be modified and used to merge data from two files. Be sure that the records in both are in the same order, and the fields being transferred are of the same type and length.

You can use a similar procedure to transfer data from one database to another, either on the same disk or on another disk drive. [REFER FIG. 3]

With these examples you can design applications to merge data files or distribute data from one file among many.

If you have suggestions for topics or application problems, please share them. We'll be happy to discuss them in this series of articles. Write care of *Australian Commodore and Amiga Review* or direct to me at P.O. Box 115, Rozelle NSW 2039.

Fig 3 - Transfer between databases

```

10 rem program to transfer data between databases
20 database "dat.one",8,0:file "file.1"
30 select f
40 a$=[key]:b$=[name]:c=[date]
50 database "dat.two",9,0:file "file.2":rem assumes two drives
60 clear:[key]=a$:[name]=b$:[date]=c:store
70 database "dat.one",8,0:file "file.1":select n:eof menu
80 goto 40

```

Adventurer's Realm

by Michael Spiteri

HELLO FOLKS AND WELCOME to another super-duper Realm. This month is our *Shadows of Mordor* special, because not only does it feature a very exclusive interview with the creators of *Shadows of Mordor* (*Lord of the Rings Pt II*), but you also have the chance to win a copy of this great 100% Australian adventure game in Adventurer's Realm's first national competition.

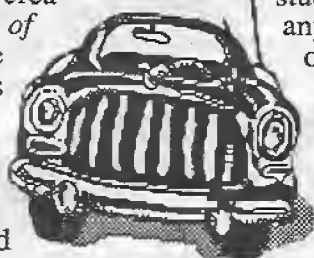
Meanwhile, normal Realm help services are still running strong, and now I have finally invested in a decent printer (an Epson LX-800), I can now start answering your letters quick-flash - as some of you may

have already discovered.

So, if you are stuck in any adventure/strategy/wargame programs or can offer help and advice to stuckees then write it. I also want your views on anything to do with adventure games, and everyone is welcome to take part in the current debate.

The address is:

Adventurer's Realm
1/10 Rhoden Court
North Dandenong
Victoria 3175



The Adventurer's SLM Publishing Plot Contest

The Competition: You have to devise an ingenious plot for any adventure game - science-fiction, mystery, comedy, adult, historical - any topic you wish. It has to be totally original. We do not want your programs, just your ideas! Only one entry per person.

The Prizes: The best ten entries each will receive a copy of *Shadows of Mordor* (R.R.P \$40).

The Judges: SLM Publishing and Beam Software will decide on the best ten winners (bribes will be accepted but not considered).

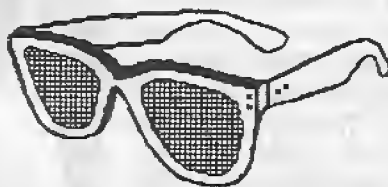
Judges decisions shall be final.

Closing Date: End of June.

The Results: Will be published in full in a future edition of *ACR*.

The Address:

Adventurer's Realm
S.L.M
Shadows of Mordor
Contest
1/10 Rhoden Court
North Dandenong
Vic 3175



Adventurer of the Month

This prestigious award goes to a character named Red Dog who lives out in a place called Townsville in QLD. Not only did Red Dog help many a troubled adventurer, but he/she (who knows!) also sent me solutions to the following adventure games: *Aztec Tomb*, *Crystals of Carus*, *Eureka* (Prehistoric), *Lords of Time*, *Mordons Quest*, *NeverEnding Story*, *Seabase Delta*, *Underworld of Kyn*, *Voodoo Castle* and *ZZZZzzzz*. Congratulations Red Dog.

Debate Centre

The newest debate concerns those awful things that live in almost all adventure games. Yes folks, I'm talking about mazes. Should they be abolished? Or should they stay? What are your views on this very important issue?



The troubled adventurers department

THIS IS THAT part of column where you can release all your frustrations. If any psychiatrists out there can help these troubled adventurers, please write in as soon as possible.

Michael Bowman of Portland, Vic is stuck in a game I've never even heard of. The game is called *Kobyashi Naru*. Any hints would be appreciated.

Andrew Phang is stuck on lots and lots of places in lots and lots of adventure games.

Buraeacracy: What do I do in the jungle and how do I open the locked door? After I plug in the cartridge given to me by the natives, what do I do next? Is the nerd useful in any way?

Guild of Thieves: How do I get the honey? What do I do in the cemetery? What is the pick used for? How do I remove the rats in

Zorker of the month

NOW TO THE other end of the scale, this month's most totally hopeless Zorker is... What? No Zorker! There must be one. What do you mean everyone cheated out by asking for hint sheets. Bah, humbug.

Hint sheets for all three Zorks are available from the Realm at no cost at all, so be a typical Zorker and try to escape humiliation by asking for a hint sheet (until, that is, I start listing all the names of people who asked for them - wow - bulk humiliation.)



the cellar? What is the anticube used for?

Spellbreaker: What do I give the boulder so that I can ride it? And how do I get it?

Barbara Carter of Brookvale, NSW is having great troubles in an adventure called *Snow Queen*. How do you get out of the garden after reading the book in Snow White?

Brian Bayly is also having problems in *King Solomon's Mines*. He writes 'After going east from the Old Zulus Camp, I once again become lost in a maze I cannot map!' (MS: *I already had to put Brian out of his misery after he was stuck in another unmappable maze in Mask of the Sun - crikey, why do programmers invent such a thing*)

Super-Adventurer Red Dog is stuck in a couple of games.

Rebel Planet: How do I stop being arrested when I try to remove the sewer cover with the deltractor? What do I do with the Black Book?

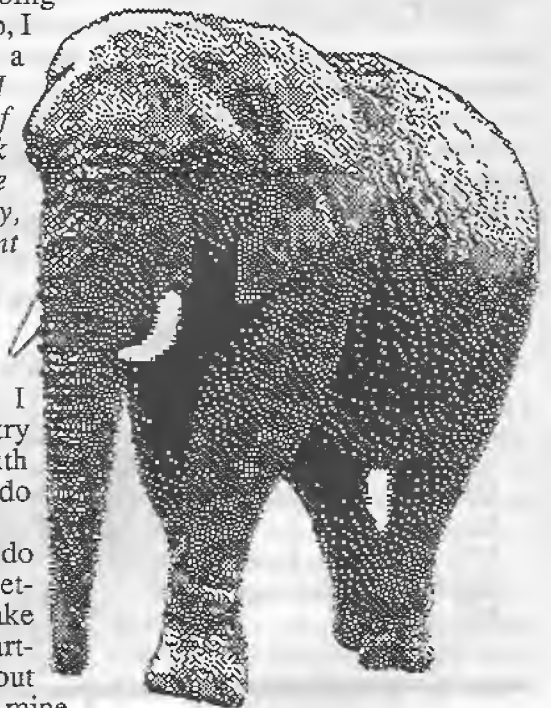
Rigel's Revenge: How do I get out of the desert after getting the bone? How do I make the gap in the bars in the apartment wider? How do I get out of the net? How do I get the mine and use it? How do I get past the

robotank? How do I fill the stun-gun? What do I do with it then?

Paul Pennington of Gatton in QLD is stuck in *African Safari*.

How do I get the paddle from the snake? Any takers on paddling the snake for Paul?

Terry Gilroy is after any pokes for *Dragon's Lair*, as he cannot get through the first stage. (MS: *I recall Dragon's Lair being an arcade game! Shame on you, Terry*)



The smart adventurer's department

EVERYONE'S FAVOURITE PART of the column. This is the part where all the juicy secrets come out, and many a troubled adventurer put out of its misery. So, if you wrote in with a problem, and I couldn't help you with it, then there is a good chance you'll see the solution here.

To: Mark Glendenning

From: Vivvienne Slater

Game: *9 Princes in Amber*

Help: Eric has a pack of trumps, get them off him and contact someone who will help you get you out of there.

To: Suzanne Parkes

From: Vivvienne Slater and Red Dog

Game: *The Pawn*

Help: To get into the workshop you'll have to lob something at the magician (ask the devil about the wristband and he'll give you the goods). To get out of the workshop you can ride the platform but only if she weighs the same as the magician. You'll have to experiment by wearing and carrying various items. Look under the pedestal for a key. Jerry Lee Lewis needs a drink.

To: Michael Lee

From: Vivvienne Slater

Game: *Leather Goddesses of Phobos*

Problem: Keeps blowing up.

Help: Maybe you should move to another location before the grenade goes off. Don't worry about Trent/Tiffany, they can survive anything.

To: Jim Fang & Andrew Phang
(MS: No, they are not related.)

From: Vivvienne Slater

Game: *The Guild of Thieves*

Help: To make the fishing rod you need the billiard cue, thread and needle.

To: David Newmann

From: Vivvienne Slater

Game: *The Hobbit*

Help: Why don't you go to the water-

fall and get captured instead.

To: Jim Fang

From: Graham Prider

Game: *Bards Tale*



Help: To get to the Mangars tower, take the passage in the sewers at level 3. The crystal rod is used on the crystal golem.

To: David Newmann

From: Graham Prider

Game: *The Holy Grail*

Help: LOB the grenade.

To: Balrog Breath

From: Red Dog

Game: ZZZZZZ

Help: At the beach, get spade, dig sand, lift bucket, get bucket, dig sand, w, push bike, e, e, ring bell, give bike to

sandman, e, examine fridge, get cheese, close fridge, untie tie, open chest, get all, w, w, w, w, drop cheese, e, e, n, (wait for sandman), thumb lift!! (MS: So much for cryptic solutions.)

To: Balrog Breath

From: Red Dog

Game: *Classic Adventure*

Help: Type in fee, fie, foe, foo after giving the egg away. Then go back to the giant's room to retrieve it.

To: David Lear

From: Red Dog

Game: *Underworld of Kyn*

Help: There is no use for the chair of the ruf. Wrap the crystal with silk and carry it. Throw the rope when at the vertical slot. The hall of darkness is a dead end.

To: Mrs M. Buchanan

From: Red Dog

Game: *Aztec Tomb I*

Help: Throw cloak, and go to the gate to get past the bull. Give cloak in tree house to get rid of dwarf. Take the box, examine it, and get the map. You must have the map before going into the forest, or you will get lost. Go north in the forest.

That should keep most of you busy till next month. So until the May issue, farewell. ■

Wargames

Gato

by Barry Bolitho

"GATO" was a fleet class submarine of the US navy. Now you can command a Gato, in this real time simulation of underwater warfare in the Pacific of World War II. After Pearl Harbour, the US submarine arm was the only force in being that could hit back offensively at the Japanese war machine.

US subs were ultimately so success-

ful that we can but wonder why the Japanese strike at Pearl Harbour did not include the large number of submarines in port at that time.

The Japanese had cause to regret this choice as the US subs went on to become the most successful submarine arm of any of the warring nations of the Second World War.

In this simulation, you are tasked by SUBCOM to seek out and sink Japanese shipping. Missions are assigned to you by radio. Hit "M" and a very American accented voice will give you your current mission.

The missions range from intercept to lifeguard duty and include covert operations; in other words, rescue downed air crew, or land commandos on a Pacific island. If the opposition looks too tough to handle, or you do not like the mission, press "M" for a change in orders.

After completing a mission you will receive a "Well done, commander" and results are entered into the ship's log, which can then be saved to disk.

Controlling the sub

Gato is keyboard operated and I missed waggling the joystick. However you soon learn which keys to hit when the enemy is bearing down on you.

A command summary card to prop up near your monitor is a big help. Controlling your *Gato* takes a bit of getting used to as the sub is sluggish and good anticipation is needed. The main screen is the control panel/periscope view. This is where you control speed, heading, depth, 24 torpedoes, periscope view, oxygen level and whether electric or diesel power is used.

Hitting "C" for chart brings up an overhead view of the patrol area. There are three islands, one of which is your home base. *Gato* shows as green, enemy ships black, unless you select difficulty four or five then enemy ships are not displayed. There are five levels of difficulty in the game.

Radar gives an excellent reproduction of a radar screen. This is the most realistic screen and is also your best guide to tracking enemy ships. Ships and islands appear as blips and leave trails on the scope, enabling you to plot their position in relation to your own.

Once in action, the D key will give a damage report and will be referred to often as things heat up. If you are damaged or out of torpedoes, a trip to your home

base to repair and replenish is required.

A parameter option is available and this allows your sub to move great distances by entering the co-ordinates of your destination. You cannot use this option to escape once you are detected by the enemy. It is a good time saver, however, the co-ordinates are not shown on the chart; so keep the instruction manual handy.

Keeping it running

Your objective is to complete as many missions as possible while on a patrol. The decision to nip off home for fuel or repairs is just one of the tactical decisions you will have to make. There is lots to do in keeping your sub running.

"After Pearl Harbour, the US submarine arm was the only force in being that could hit back offensively at the Japanese war machine"

When submerging you must remember to switch from diesel to battery power. Fuel, battery and oxygen levels have to be monitored. Low oxygen will force you to surface, perhaps in the midst of a formidable and very aggressive enemy. Torpedoes are aimed by the periscope and as there is no independent provision for moving the targeting periscope, you have to wait for the sluggish *Gato* to line up on the target. The enemy is pretty good at his job and will detect your radar if used too often. Once detected you lose your sub's precious element of surprise. You can then clearly hear the pinging of the enemy's sonar as he starts to track you down. This is followed by the sounds of shellfire and depth charges if you are not quick off the mark.

This is a good simulation that has some first class attention to detail, such



as the radar screen. Unfortunately it falls short of the mark in some respects.

The deck gun is sadly lacking, and the inability to swing the targeting periscope on to the enemy without dragging three hundred and eleven feet of sub around is tedious. The view through a periscope was not all that clear, but it had to be better than the chunky unrealistic graphics that we see in the game.

The most disappointing aspect in this simulation is the slowness of the program itself. Waiting for the different screens to appear after selecting them seems to take ages. This is especially frustrating when in the thick of the fray, and you're trying to get that last desperate shot down the throat of an advancing enemy.

Perhaps we have become spoilt by the fast machine language execution of the latest programs. This slowness does detract from the playability of the game, it makes it appear dated.

The missions, although various soon have a similarity about them, and once the game mechanics have been mastered, gameplay becomes repetitious. *Gato* is not addictive, it lacks the sparkle to be a great simulation.

The inevitable comparison is with the excellent *Silent Service*, which just happens to be my favourite and most played game. It does seem a pity to criticise a simulation that not so long ago we would have seen as a milestone.

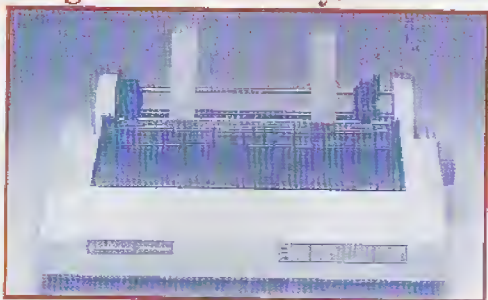
Conclusion

Perhaps you had better take a look at this one and make up your own mind, for in my opinion, *Gato* does not play well as a game, and sinks into the depths when measured up against *Silent Service*. ■

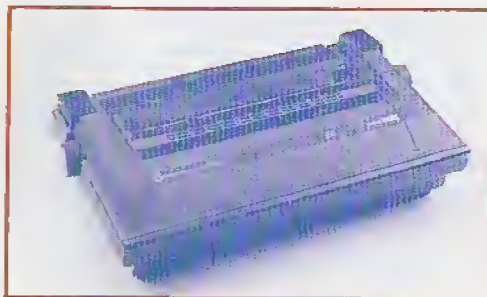
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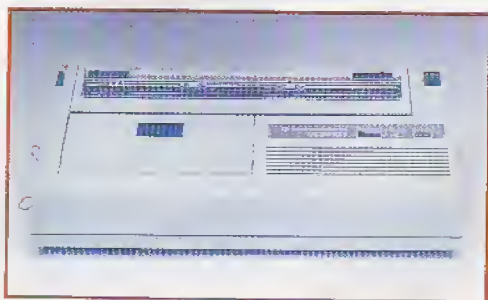
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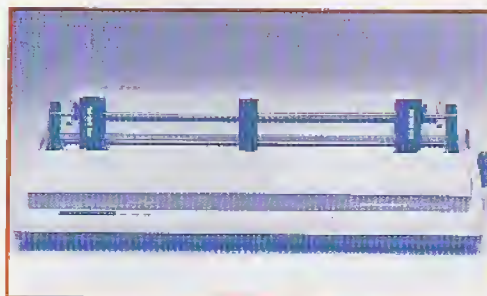
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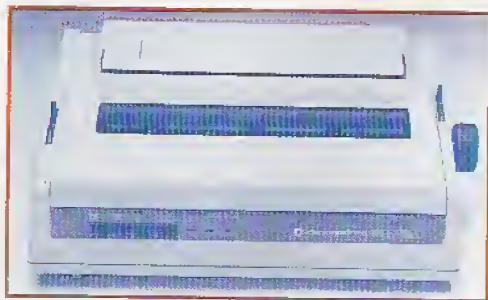
Commodore DPS 1101 Daisy Wheel



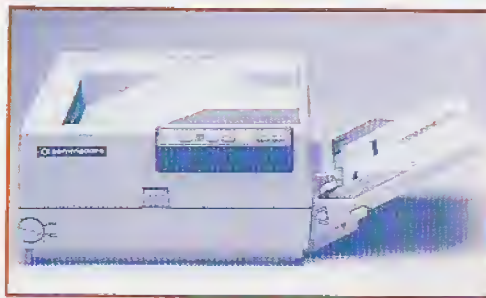
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